NATURAL CURES DATABASE: TRADITIONAL FOOD SHOCKINGLY ANTI-MICROBIAL, ANTI-INFLAMMATION, ANTI-PLAQUE, ANTI-ULCER, AND ANTI-CANCER; CAN HEAL TENDONS AND BONES; OFTEN PHARMA-POTENT WITHOUT SIDE-EFFECTS

By: Joel v.d. Reijden | **Date:** May 4, 2024 | **Last update:** May 8, 2026 | HEALTH CENTER.

Nothing here constitutes medical advice. Everything you try is at your risk. Consult with your doctor before taking anything, even 1mg of vitamin C. The article also doesn't deny that medical science can be extremely useful.

- List of the most potent anti-microbial compounds

HOW PEOPLE HAVE CONTROLLED OR CURED:

Psyche:

- ADHD
- Anxiety
- Depression
- Sleeplessness
- Stress

Colds:

- Flu / cold

Skin:

- Acne
- (Sun)burns
- Ulcers
- Cuts, wounds, bruises, blisters, scars, pain
- Dry, flaky skin
- Thin brows/lashes
- Eczema
- Dandruff
- Psoriasis

Airways:

- Asthma
- Bronchitis
- Sinusitis
- Nasal polyps

Ears:

- Infections

Eyes:

- Dryness
- Floaters
- Cataracts
- Myopia
- Nearsightedness

Mouth:

- Bad breath
- Gum bleeds
- Gum infection
- Discolored tongue

Digestion:

- Acid reflux
- Stomach ulcers
- Ulcer colitis
- Constipation
- Diarrhea
- Diabetes
- IBS
- SIBO
- Bugs: H. pylori
- Bugs: Candida
- Bugs: parasites

Heart & blood:

- Blood pres.: high
- Heart disease
- Thrombosis
- Varicose veins

Bones & joints:

- Arthritis
- Back pain
- Broken bones
- Gout
- Osteoporosis
- Tendon tears

Renal:
- Kidney stones
- Urinary tract infection

Reproduction:
- Infertility
- Vaginal yeast

Neurology:
- Dementia
- MS
- Neuropathy
- T. Neuralgia

Cancer:
- General
- Colon

Remaining:
- Heavy metals
- Manboobs
- Microplastics
- Smelly feet
- Testosterone: low

NATURAL COMPOUNDS AND THEIR USES

Vitamins: fat-soluble:
- Vitamin A
- Vitamin D
- Vitamin E
- Vitamin K (K1)
- Vitamin K2

Vitamins: water-soluble:
- Vitamin B
- Vitamin C

Minerals:
- Calcium
- Bismuth
- Boron
- Copper
- Iron
- Magnesium
- Zinc

Flavoring:
- Black Pepper
- Cacao
- Cayenne
- Cinnamon
- Coriander
- Garlic
- Ginger
- Ginseng
- Onions
- Neem
- Radishes
- Rosemary
- Salt
- Tarragon
- Thyme
- Turmeric
- Vinegar

Vegetables:
- Artichoke
- Broccoli
- Cabbage
- Celery
- Kale
- Spinach

More:
- ALA
- Aloe Vera
- Ashwagandha
- Baking soda
- Berberine
- Boswellia
- Bromelain
- Charcoal
- Comfrey
- Coneflowers
- Chlorophyll
- Cranberries
- Dandelion
- DIM
- Ginkgo biloba
- Grapefruit
- Honey
- L-carnitine
- Lemon juice
- Mastic gum
- Moringa
- NAC
- Nattokinase
- Papain
- Peppermint
- Psyllium husk
- Senna
- Spirulina
- Tongkat Ali
- Vitamin U
- Wheatgrass
- Wormwood
- Zeolite

Mushrooms:
- A. bisporus
- A. blazei
- Lion's mane
- P. cubensis
- Reishi
- Shiitake
- Turkey tail

Oils:
- Black seed oil
- CBD oil
- Castor oil
- Cinnamon oil
- Clove oil
- Coconut oil
- Garlic oil
- Jojoba "oil"
- Lemongrass oil
- Olive oil
- Olive oil: ozoned

- Omega 3
- Omega 7
- Oregano oil
- Rose geranium oil
- Tea tree oil
- Thyme oil
- Texas cedarwood oil

Probiotics:

- Kefir
- Kimchi
- Pickles
- Probiotic pills
- Sauerkraut

Teas:

- Essiac Tea
- Green Tea
- Rooibos Tea

Peptides:

- BPC-157
- TB-500
- Ipamorelin
- GRF Mod-1-29
- CJC-1295 DAC

Unsure:

- B17

INTRO

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Scientific quotes demonstrating natural cures

"Based on our data, the predicted incidence rate of colon and rectal cancer [CRC] in 2030 will increase by 90% and 124% in patients aged 20 to 34 years. ... A 1.5% per year increase [or 25% total] in the incidence of CRC ... from 1992 to 2005 aged 20 to 49 years of age has been previously observed. ... Similar results have been observed in young women with breast cancer."

~ Jan. 2015, JAMA Surgery. [1]

"Juice mixtures (at a 7:3 ratio) showed synergistic effects [of] ***71%*** *[inhibition] with high amounts of cabbage and chlorella (CChH; 800 mg/kg),* ***74%*** *with high amounts of cabbage and kale [versus]* ***75%*** *with [traditional heartburn and peptic ulcer inhibitor drug]*

cimetidine. [Thus cabbage,] chlorella or kale [are perfect for] the prevention and treatment of gastric cancer and gastritis."

~ May 2013, Journal of the Korean Society of Food Science and Nutrition. [2]

"Patients with peptic ulcer were treated with fresh cabbage juice... healing time for ... duodenal ulcer was only 10.4 days [compared to] 62 patients treated by standard [medical] therapy [at] 37 days. ... Gastric ulcer [healing time] with cabbage juice was only 7.3 days, compared with 42 days [with medical drugs]. ... Human consumption by heating or cooking may completely destroy this factor."

~ Jan. 1949, No. 1, California Medicine (PDF). [3]

"Conclusions: Efficacy of Neem [herb] extract is comparable to 3% NaOCl ***[bleach]*** *against C. [Candida] albicans and it is significantly better than* ***[popular medical disinfectant]*** *2% CHX."*

~ 2014, Brazilian Journal of Oral Studies. [4]

"A formulation containing Curcuma longa and Boswellia serrata extracts ... in osteoarthritic patients ... was more successful than administering [NSAID] celecoxib 100 mg twice a day for symptom scoring and clinical examination."

~ 2013, Molecular Medicine Reports (Indian study). [5] Celecoxib is similar to Ibuprofen.

"The success rate of treatment in the first group [vinegar only] was 91%, it was 95% in the second group [with the senna purge only] and 97% in the third group [combining both]; while the best success rate of the current antibiotic H. pylori eradication therapies as demonstrated in literature was maximally 83%...

Natural measures of H. pylori eradication employing the senna purge and vinegar are superior in efficacy to the current antibiotic strategies. [We need a] change attitude of medicine..."

~ Sep. 24, 2015, General Medicine: Open Access journal (L.A.) (PDF). [6]

"The in vitro results showed that the growth of [black fungus] A. niger was completely inhibited by the application of clove oil at [all] concentrations ... as well as thyme application with concentrations of 800 µL [0.8 mL]... The present study suggests that the use of essential oils especially thymus and clove may be a useful alternative to the use of synthetic fungicides."

~ April 5, 2020, Scientia Horticulturae. [7]

Organizing was needed

For quite a few years I've regularly looked into a variety of natural supplements and natural solutions to various health issues. ISGP never was the place to do something with that though, so there wasn't really any structural organizing going on with these subjects. This lack of organization has been a bit of a waste of time. Word documents and notepad scribbles with brief summaries were strewn all over my laptops and phones, very often getting lost over time - after which, after a few years, I had to re-research the entire subject. Just the different variations of omega 3 fats and anything surrounding it I have researched three times, after losing the scribbles the first two times. Garlic, turmeric, and cayenne all were subjects I had to re-research for this article, because I had lost my notes on these compounds too.

In the end, the solution was simple: spent a few days organizing all my research onto a single ISGP page. And make that page the first article and oversight of ISGP's "Health Center". It always was a desire to create such a center, but there happens to be some serious natural resistance in this author to actually make information along these lines freely available. The online and offline "health industry" is gigantic and filled with "commoners". The main annoyance is that pill-sellers on YouTube and elsewhere will just copy isolated information they find here and build up their own prestige and wallets without giving credit, while ISGP gets ever more heavily censored and isolated by search engines from China to the United States.

It's a little different with the political content of ISGP: it's much more of a niche "market" with a lot of very unique content. YouTubers and other online "influencers" simply can't tell the truth about ISGP content anyway, or they too will be censored. So I've always been able to do my thing without spotting much, if any, competition.

However, not having a place to organize "health information" has become such a personal nuisance that I felt an oversight like this had to be created. Not doing it publicly, is not going to motivate me to create and update it - so here we go. And it must be said, while compiling the original oversight, an incredible amount of new natural substances were discovered and additional insights gained. Just the experiments on vitamin U dating back to the 1940s and 1950s were nothing short of shocking to me personally.

So for personal development and making ISGP more dynamic, this oversight is a great addition.

Science and users are key

There are basically three main sources of information in this oversight:

1. Scientific studies.
2. Online experiences of users at forums, comment sections of websites, social media, and product reviews - all compared and after having been taken in as a whole.
3. Personal experiences of this author.

Contrary to what "authority" and its all too many followers tend to proclaim, online user comments are extremely useful. Scientific studies, for obvious reasons, are extremely narrow in scope, with seldom any mention of any other compounds. And whereas producers of video content have little interest in superficially mentioning additional health supplements in one YouTube video, especially when they haven't made any additional videos about it, commentators often go, *"I tried this with that, and it worked for me."* Or they may go, *"I had similar experiences with that supplement."*

Ironically, by mid 2025, a year after this article was created, ChatGPT too started doing the same thing of openly combing the Reddit forum in particular for personal experiences. Thus, it can be concuded that I am not the one who thinks that user comments form an essential network, or glue, between an infinite number of compounds discussed in this oversight. It's user comments, for example, that first made me aware of:

1. fenbendazole, underneath a video discussing wormwood [8];
2. neem;
3. berberine;

4. moringa;
5. zeolite;
6. castor oil;
7. comfrey;
8. Lion's mane mushrooms;
9. and alpha-lipoic acid.

Interestingly, there's a tendency to go, *"Yeah, that compound can't be so special. I would have heard about it by now, right?"* You can even get annoyed by people's experiences, as happened with me with a person talking about using something "silly and eccentric" called "comfrey" - as my mind went - next to aloe vera. So you ignore whatever was recommended, at least for some time. But once you finally look into it, sometimes after hearing about it multiple times, the compound very often turns out to be many times more interesting than you initially thought.

Fact is, there are just an incredible amount of beneficial natural compounds out there that the average person has never heard about. You certainly aren't taught about them anymore in your witchy grandmother's kitchen, or at school. And your witchy grandmother didn't even hear about the vast majority of these compounds, except what mainly was part of her immediate surroundings and culture. Historic use of garlic to combat colds probably is the best-known example here. But in many parts of the world comfrey and castor oil were frequently used for ailments as well. Even spreading the scent of rosemary to increase memory has quite a rich history behind it. It's just all forgotten, replaced by fast food and pharmaceuticals with as many x's in their name as side effects.

Secondly, online user comments are the only way outside of your immediate surroundings to get a sense of what works, and for what issues. If one person claims something worked for them, it may be something to keep in mind, but you can't always give too much credence to it, especially not when they took a host of other natural compounds.

However, when in 30 minutes you find 50 people complaining of migraines when ingesting artificial sweeteners from aspartame to sucralose, and another 15 complaining about (eventual) intestinal upset, especially with sucralose, it would be wise to pay attention. Subsequent research quickly started to conform this criticism as well.

So the thing is, where there's smoke, there tends to be fire. And user comments is what pointed me to the fire the quickest in this case. Beyond a minute or two, in this case I didn't even bother looking at Google's sanitized search results and Wikipedia's tedious, formal discussions, often devoid of all kinds of crucial facts. I went straight looking for criticism of users at forums. Without them, and without my own

personal experience, finding the core issues would have been much more of a struggle.

Similarly, if "authority" says you cannot cure cancer by yourself, but next you are able to find a handful of people who did this through fasting and carbohydrate-poor diets; or dozens of others who claim they cured their cats, dogs, horses, friends and themselves from late stage cancer by ingesting a (still) cheap antiparasitical drug named fenbendazole: pay attention.

When "authority" says that you cannot rid your body of heavy metals without medical chelation therapy, but internet forums are full with people successfully detoxifying themselves with all kinds of natural compounds, including liquid zeolite: pay attention.

Of course, you need to be careful. Always be a little wary. But pay attention. Don't just dismiss.

As the reader can see, user input is extremely important. It's key in spreading information through networking. It's key in getting to the core problems and solutions quickly, saving enormous amounts of time. It's key for "group confirmation" - because in the end we are pack animals and we need other people around us having the exact same experiences as us.

Search engines downranking forums is a (health) problem

Therefore it is a tragedy, of course, that the world's most dominant search engine, long-time Bilderberg steering committee company Google, has been artificially propping up "authoritative" sources in its search indexes since 2017, with forums all but having disappeared from most of its search queries by 2020. This author is far from the only one complaining that you need to add "site:reddit.com", "reddit", or "forum" to just about every Google query to get anything remotely genuine and interesting in terms of independent user feedback. [9] Other search engines increasingly are following Google's lead on this matter.

Meanwhile, user comment sections on news sites and Google's YouTube have been ever-heavier policed, from 2023 on increasingly by AI. "Conservative CIA" disinformation on Covid in particular has only made it harder to discuss anything not backed by the international medical establishment. In fact, Reddit itself is frequently attacked for extreme censorship by its "super-moderators", able to quash anything unwanted in a vast range of sub-reddits. This author has had his fair share of experiences with that as well.

Still, in the right subreddits, certainly away from political subjects, often a good degree of useful feedback can be harvested. With Reddit's

dwindling visibility in search engines, it is hard to say how long this will continue. A whole lot of the lengthy, useful discussions you run into, date back to the 2010s. And manually searching for other, smaller forums on the internet is less and less practical. They may disappear all together in the future when search engines keep downranking these "free speech zones".

In that sense, one of the reasons to expedite the creation of this oversight, is to be able to harvest all relevant comments from forums and comment sections before they've disappeared into the mists of time. (Ironically, a year after this article was first published, ChatGPT continually started referring to Reddit too for practical user experiences) Who knows what comes in their place? Maybe zero online free speech. Maybe vast AI-driven disinformation, expanding from the conspiracy into the healthcare domain, Covid disinformation being a major excuse for it. Google's YouTube already is heavily censored, to the point its search on political subjects is completely and totally useless due to the almost exclusive pushing of mainstream media channels. And by 2023 alternative health channels on YouTube too started complaining about being secretly downranked in algorithms [10], or that they had content removed whenever YouTube thought it involved *"medical misinformation"* that opposes the United Nations' World Health Organization or *"local health authorities"*. [11] Alternative health videos aren't even remotely "downranked" as much as the average ISGP subject, but already people are complaining and upvoting (in this case slightly irrational) comments as these:

> *"I hate that these [fenbendazole] videos are now being shown to me after my mom died. After looking for videos for these. I'm convinced YouTube is listening and trying hard to prevent me for finding results that could have saved my mom."*[12]

These videos indeed are hard to find. First you have to create your own "algorithmic suggestions bubble", and then wait over the years what YouTube happens to feed you almost by accident. Or, as explained here, you have to scan the comment sections for insights. But these too are heavily manipulated. Since 2022 empty "fawning", "worshippy", "loving" comments are artificially top-ranked, with channel owners, who often only tolerate their own views or official views, able to remove any comment at will. So channels basically all form their own cult. AI shadow bans a lot of comments as well. None of these are good developments.

In any case, user experiences are key. Especially when they are backed by provided personal proof, or by scientific studies - which, in all fairness, can often be overly limited in their scope, or actually contradict each other. They are not necessarily a holy grail just by themselves. In the

end, science shouldn't forget that it is of zero value without users to benefit from it. And that is why users will continue to be included here. If you controlled or cured a health issue with some kind of supplement, and went through the effort of making a post about it, often at the cost of making yourself relatively vulnerable, you want the world to take your experiences serious too. Or at least take it into account.

The only thing that is not practical here though, especially time-wise, is to back up all the urls and all the (fictional) user names of persons making specific comments. Some comments are edited for spelling errors and other grammatical errors, but a lot of the forum comments you should be able to find for years to come by copy-pasting segments of them in between quotation marks in Google. Videos on YouTube on these subjects also are very limited, so you should be able to find back a lot of quotes from the respective entries here for a number of years just by searching for the relevant subject. Likely you will find all kinds of newer, overlapping feedback, assuming censorship hasn't gotten worse.

The West underrepresented in international studies

One interesting observation going through hundreds of scientific studies, is that the West all of a sudden isn't overrepresented when searching for studies on natural remedies for everyday diseases. Collecting the various scientific studies for this oversight with regard to natural remedies, China, and even more so Chinese people as a whole, are particularly heavily represented. The rest of the "research cake" is divided between countries as India, Malaysia, Indonesia, Brazil, Iran, Saudi Arabia, Egypt, Pakistan, and even Sudan. While it can't be said that every study that comes out Africa and the Middle East exactly is of the highest quality (I've seen plenty of spelling errors and some questionable data), all these countries have been represented by scientists that have carried out important research into natural compounds, often into compounds native to their region: neem, turmeric and boswellia in India, moringa in Indonesia (and India), green tea and Shiitake mushrooms in China and Japan, black seed oil in Saudi Arabia, Rooibos tea in (South) Africa, etc. The United States and Europe also have contributed important studies, of course, but you can tell there is a much more heavy focus on pharmaceutical drug testing, or anything related to typically "western diseases" as diabetes, coronary heart disease (CVD) and cancer.

If pathogens as staph (MRSA), tuberculosis, and gonorrhoea weren't developing immunity to traditional antibiotics (ignoring all the resistance the agricultural industry is creating), we likely would have seen far less of these studies still, not just in the West, but also around the world - because very often these "alternative" studies are justified by the phenomenon of "antimicrobial resistance" (AMR), and in particular "antibiotic resistance". This research into natural compounds remains

obscure, despite the fact that antibiotics destroy the total gut microbiome in humans, often leading to months, years, or even lifelong additional health issues. Antibiotics essentially destroy the entire body if you give them enough time. Many also are ototoxic, leading to disastrous hearing problems as tinnitus. Even the "mild" Amoxicillin has been reported by people/victims to do that, and it's not even listed in the (very) lengthy " adverse effects" list in the instructions manual.

Compared to antibiotics, natural compounds always are much more selective in what they kill, and regularly even are comparable or better in the results obtained than antibiotics. Examples include certain natural protocols against Helicobacter Pylori, the eradication of bad mouth bacteria, or the healing of intestinal ulcers. You just don't know about these alternative remedies, because they're never mentioned and seldom studied. Most people in general have no clue in general that many of our traditional foods have strong anti-microbial activity, from garlic to vinegar. Imagine if people were aware, how it would also change (back) our eating habits.

Fact is, if I was a billionaire, I could easily finance dozens, if not thousands, of additional studies that really would take knowledge of the efficacy of natural compounds to a whole new level - assuming the media is willing to give attention to it. In that sense it is very depressing how little research is being done. Looking at all the governments, centi-millionaires, billionaires, and (food) corporations in the world, a billion dollars is not a lot of money. People are just not paying attention.

A missing key here: the meridian system

An important thing to admit is that this entire oversight is a scam. Why? Because I'm not talking about the meridian system. Unclogging these invisible, underground rivers throughout the body for over two decades while working on ISGP, is essentially what has been keeping me alive. Working on ISGP causes some sort of stress reaction, as well as various additional "economic-relational stressors" - in addition to apparently drawing in all the demons of the world that need to be exorcised. Within 3 months of starting what became ISGP, I started to develop dandruff. The other issues all appeared within 5 years:

1. Massive dandruff from the back of the head, slowly moving down to the eyebrows, and eventually even the beard.
2. Massive hear loss. It literally burned off my head with the dandruff.
3. A fully clogged nose, leaving me gasping for air.
4. Massive hay fever, literally preventing me from going outside ever larger portions of the years.

5. Sensitive stomach issues, which I've had since the age of 15, a lot of it related to nervousness, and later exacerbated by way too much sugar, high fructose corn syrup, sucralose and a mini-bout of Amoxicillin antibiotics.
6. Apparent candida to coincidence with it: a white tongue, followed by a yellow one after just 5 (unnecessary) Amoxicillin pills.

Despite house doctors and specialized hospital doctors all saying they couldn't help me, except with maybe some pills, over time I cured or reduced by 90% all these "incurable" issues. Only to get sick again in most cases, because I kept working on ISGP and otherwise didn't change my lifestyle. So it's a neverending cycle of "get sick - cure yourself in mysterious, impossible ways".

The hair I actually gave up. And just put a tattoo on my scalp, while lasering as much "horseshoe hair" away as I could. For me, on top of restoring the meridian flows through the scalp, it would simply require a ceasing of all intellectual endeavors and bring back the inner horny, dancy, cool monkeyman. This may not make sense to a lot of people, but let's not forget that not just myopia has been exploding since the 19th century; so has baldness. There are "going against nature" reasons for that.

But how did I fix or at least control the other issues? Taking medicines? No. Taking vitamin pills? No. Other natural compounds? No. As indicated, I worked with the meridian system. In fact, over 1,000-2,000 hours of experimentation I developed my own acupressure and qigong system. As a result, the meridian system is as normal as breathing to me. It's literally key to keeping me functional.

So in that sense I feel that this entire "pill and home remedy" oversight is a scam. It really isn't, of course, because it's a 50-50 thing. Or really a 1/4th-1/4th-1/4th-1/4th thing, if we include physical exercise, as well as surgery and certain medicines, as additional pillars to health. But if I don't at least hint that the meridian system is heavily involved in *actually* curing many of my personal "incurable" chronic diseases - and not so much the natural compounds listed here - I feel like I'm scamming readers.

I'm not publishing any details on this any time soon though.

Western medicine, TCM, or supplements: all mostly symptom treating

Another thing that might need to be said is that everybody is treating symptoms. Western doctors and pharmaceutical companies often are accused of doing so, and this certainly is true for the most part, but it also

is true with Traditional Chinese Medicine (TCM). It even is true many times with taking natural supplements.

In case of the latter, we can give plenty of examples:

1. You have high blood pressure. Instead of taking a pharmaceutical statin, it turns out moringa works wonders for you. So every day you take a moringa supplement and get rid of the statin.

2. You successfully take high amounts of vitamin D, or moringa again for that matter, to treat your arthritis.

3. You always have a stuffy nose. You take a NAC every day and the stuffiness clears up.

4. You have joint pain. You take a daily turmeric supplement. It goes away.

5. You have arthritis. You take a daily turmeric and boswellia supplement. It goes away.

6. You have low testosterone, but managed to increase into an acceptable range by taking Tongkat Ali, and maybe some DIM.

It should be clear that each time you cease taking the supplement, the underlying health issue comes back - while it does not come back for a "healthy" person. In other words, you are still chronically sick. You were just able to mask it with a pill. So why are you sick? Well, usually nobody knows.

True, sometimes the supplement may allow the body to heal over over time. And sometimes you are able to flush out heavy metals - for example, with zeolite - or various toxins from the kidneys or bladder - for example, with baking soda - that most definitely allow for long-term healing. But in many cases, supplements are simply countering symptoms of sickness.

My experiences with Traditional Chinese Medicine are exactly the same. They massage you. They put some needles in you. They prescribe some (expensive) herb "tonics" to balance out that completely invisible meridian system of yours. And after you do this for some time, and come back for a bunch of additional sessions, you may actually get the result you're looking for. The problem is, in many cases the underlying issue has not been fixed, and you need to keep coming back.

That was the case with me. As I realized only years later, most of my issues were caused by emotions. These negative emotions caused an imbalance in the meridian system, which caused the homeostasis of the

body to be thrown off-whack, leading to the development of all kinds of physical issues. As somebody who again and again has been controlling and fixing certain issues, this process has become extremely recognizable. You literally can often feel the energy moving along meridians documented millennial ago: from ice cold, to intensely hot, to a little "acidy burning", to what it usually is: just a little trickling, itching, or some radiating, dull pain. Followed by an immediate reduction of physical symptoms.

It's not necessarily that a healthcare worker, especially a western one, isn't interested in figuring out the root cause. It actually is part of their education, and is meant to be figured out by asking questions as, *"When did this issue first appear?" "What changed?"* The problem isn't even necessarily that "emotions" are largely separated from "physical health", because it has been accepted that heavy emotions can cause physical symptoms as an upset stomach or migraine. The problem is that it isn't known that bad emotions cause SO many more diseases than we know today. Speaking from extensive personal experience, hay fever and dandruff are among them. But I've never seen a single person insert emotion into the conversation.

With TCM, it is more acknowledged that emotions are one of the causes of physical health, because emotions affect the meridian system. It is hard to say to what extent TCM practitioners are aware of this though in a very practical sense. There seems to be very little knowledge of "emotion X causes physical symptom Y". It also seems that there is a general custom, and similarly with western practitioners, to not "prod too much" on the emotional front because it is invasive and rude. They, in fact, literally created a separate branch of healthcare for that, called "psychology". So western and TCM practitioners generally proceed to just deal with the symptoms, which respectively is drugs versus meridian rebalancing and herbs.

What at least theoretically should happen is that in many cases you arrive at a doctor or TCM practitioner with a summarized psychological rapport about all your emotions about worklife, social life, and anything else that might greatly bother you - including timelines, also when certain physical complaints started. The problems there, of course, are a lack of time, a lack of money, a lack of radical honesty of the patient about all his shameful emotions, and also society being too politically correct to discuss a lot of emotions. Then there very much is the question if the emotional state can even be changed. Work, a lack of money, and family-obligations tend to keep people stuck in situations and emotions they don't want to be in.

But yeah, in the end, I personally feel western medicine, eastern medicine, and natural supplementation all predominantly are merely

treating symptoms. They are just busy compensating for unhealthy diets, unhealthy environments, and unhealthy emotions. They can't "fix" a whole lot. Mostly, they can just "manage". But maybe to be "fixed" is to not be part of this dimension. It's a pretty imperfect place with endless opportunities for emotional and physical damage. So there's that.

So, with western medicine, eastern medicine, and all-natural pill-popping culture we are dealing with limited frameworks. Just as psychology is, another one of the holy trinities in our society. I may have have stressed the importance of psychology as few lines back, but psychology too exists within an extremely limited framework. There are much more dangerous, but infinitely better "psychologists" out there than the one who have formal degrees. But those are, once again, a discussion for another time.

Now that I'm busy, similar to doctors and psychologists, physical therapists never helped me with anything either, except by giving me an echo on the state of muscles and joints. I always had to go online for (endless) research, or even come up with my own exercises to fix myself, because the ones they gave me didn't work.

In April 2024 I asked one who markets himself as a "master in sports" if he had ever heard of BPC-157 or TB-500. He never heard of it, despite a lot of high level athletes using it since the 2010s. To most people, being a doctor or physiotherapist is just that: a job that pays the bills, and gets you some prestige along the way. They have no passion. No real drive beyond those basics.

Also, Quantum Touch for me at one point was way more effective at treating back spasms than any purely physical physiotherapy massage. Somehow it got rid of knots that purely physical massage, or even dry needling (which only made thing worse), could not. It also did so on a long-term basis, of several years. To this day, traditional science doesn't understand why certain muscle knots ("trigger points") are much more stubborn than others [13], so how can you even expect physiotherapists to properly help a lot of people with something so common and basic? It's a huge gap in knowledge in physiotherapy, to the point you start wondering if it can even be called a legitimate profession without filling that gap.

Believe in yourself

The main message is that all the appointed experts in our society - the doctors, the pharmaceutical companies, the psychologists, and the media and politicians that protect their system - are grasping at straws. There's more they don't know than they do know in terms of what heals a person from chronic diseases.

They often are good at diagnosing, as doctors are trained to do so with a large number of common diseases. That's great, of course, but once diagnosed, hopefully correctly, there basically always are three possible solutions:

1. Pray it goes way with rest, some exercise, or "healthy" dieting.
2. Prescribe pricy drugs, often with major side effects.
3. Surgery.

It has been demonstrated in this oversight that a lot of people can be helped better with natural supplements and proper dietary regiments - dietary regiments that partly go against what modern "dietary experts" claim is healthy (i.e., those who relate the opinion of powerful, globalist interests). Feel free to experiment with the information. Even add your own experiences to them.

Furthermore, the idea is that this oversight helps people to have more faith in themselves - that they have enough information at their fingertips to oppose the age old mantra to "not be a know-it-all, and just listen to the doctor", and try some supplements and health foods for themselves that they never even heard of before. And that they also dare to suggest alternative, natural remedies to friends and family.

This oversight is not even about contradicting your doctor. It's just about gaining knowledge that neither you, nor your doctor, were taught in the first place. Quite a few doctors are very open to this information. But for them too it is extremely time-consuming and hard to figure out what to advise their patients in terms of alternative supplements. Without much more research being done, with consistent result, and all of it easily accessible, doctors too basically are merely guessing as to what will work for a certain person. It is a slippery slope for them. Following "authority" is a lot easier and safer.

Stick to nature: what to avoid, what to eat

Similar to the cancer industry, the diet industry is massive. There exist all kinds of different diets and views on what is healthy and unhealthy food. There are a few things that "anti-establishment" "health freaks" on both sides of the diet spectrum - pro-meat versus pro-plant-based - tend to agree on though. And that is that the following foods and food additives best be avoided in the long run:

1. Processed seed oil, except cold-pressed.
2. Processed vegetable oil, except cold-pressed. Extra virgin olive oil and maybe coconut oil is fine, also for cooking. Don't let it burn though.
3. High fructose corn syrup.
4. Maltodextrin.

5. Artificial sweeteners as aspartame, acesulfame, saccharine, sucralose, and even stevia and monk fruit extracts.
6. Sugar.
7. Transfats.
8. Heavily processed meats.
9. Anything with microplastics, antibiotics, or other contaminants in them.
10. Too much wild fish, due to heavy metal and microplastics contamination.
11. Almost anything with shiny packaging in the supermarket.

In general, I personally would say: stick to nature. Stick to what our human bodies have evolved with for hundreds of thousands and, in monkey form, even millions of years. Just seeing how so many natural compounds, from olive oil to garlic and neem, predominantly attack bad bacteria to us instead of just eradicating everything, or just purely at random, strongly indicates that there has been eons of synarchistic co-development between us and "them". That's not something to dismiss, and replace by artificial substances created and altered by chemists for the sake of corporate profit, with an attitude of "knowing better than nature". Sometimes man does improve ion nature. But many times it doesn't, and is unwilling to admit so because it leads to financial ruin.

Of course, "sticking to nature", doesn't mean that everybody has to have the exact same "ideal" diet. Just the fact that white people are the only race not lactose intolerant for the most part, shows that there are differences between what "natural" foods people can and cannot properly absorb. Depending on gut microbiome diversity, gut health, taste buds, and to a degree racial background (some Asian societies digest starches better through more AMY1 gene copies; Eskimos process fat differently through FADS1, FADS2 and FADS3 gene changes), people are going to prefer different foods.

Some people, like this author, thrive on meat. Personally, I digest nothing better than it. Dairy is a close second, and makes me feel satiated and strong, while a lot of carbohydrates, especially those in supermarket bread, give me loose stools and-or flatulence, make me feel weak, and keep me unsatiated throughout the day. Some people have the exact opposite experience though. A lot have trouble with dairy in particular, and don't consider it healthy. A smaller percentage can't even properly

process fatty meat. They might prefer to eat a lot of vegetables and fruit instead.

It's all fine. In fact, the less people thrive on a heavy meat- and dairy-based diet, the easier this planet is to manage resources-wise. But as long as you stick to natural food, and include herbs and (root) vegetables listed in this oversight, which have been part of our traditional kitchen for thousands of years and (now) are known to combat many diseases, who can blame you of doing anything wrong?

Veganism is politics - and needs better defining

In the 1980s and 1990s there were discussions about the health benefits of vegetarianism: not eating meat, but continuing to eat dairy. Certainly from the late 2000s, in no small part through YouTube and social media, even vegetarianism was supplanted by a barrage of discussions that we really should all be vegans. The fact is, at the moment this simply is the result of globalist propaganda related to the reduction of carbon emissions per international treaties as the 2015 United Nations Paris Agreement. There's no debate possible, similar to how white replacement is rammed through white people's throats whether they like it or not. It's going to be a fight to the death for average citizens to try and stop it.

There's no need to get into this agenda in any detail here, because that already is being done in ISGP's intro article, complete with sources. The main problem with veganism - taking this author's "stick to nature" approach - is that we get away from exactly that: nature. Because veganism bans the following foods:

1. All meat.
2. All fish, including sushi.
3. Cheese.
4. Milk.
5. Kefir.
6. Yogurt.
7. Quark.
8. Butter.
9. Eggs.

Humans have been digesting these natural foods for ten thousand years and more. So what is there left to eat? What comes into its place? Let's see:

1. Rice and potatoes.
2. Vegetables.
3. Fruits.
4. Nuts.
5. Supermarket bread.
6. Historically transfat-laced, "plant-based" margarine instead of natural butter.
7. Peanut butter and chocolate sprinkles instead of cheese.

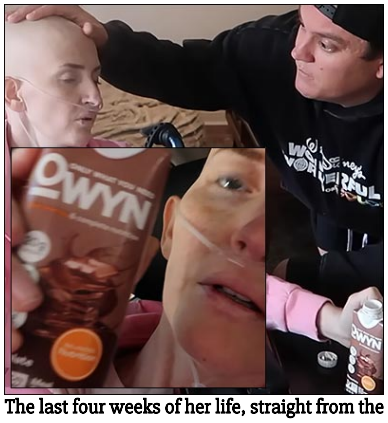
8. All the sugary, rancid, artificial garbage foods and food additives of the previous section, because there's barely been any talk of banning these.
9. Maybe insects in the future, although its viability has been questioned, with it being particularly ironic how also with this sub-agenda, "animal rights" seem to be of no concern with globalist elites; only with average citizens.

10. Artificial, laboratory-grown meat, likely in the future based on animal muscle cells with actual proper protein levels.
11. Artificial, laboratory-grown dairy, likely in the future also based on animal cells.

Almost reality: a world without barbecues, hamburgers (without the rancid "plant-based" sauces), grilled cheese, ham-cheese and -egg sandwiches, or French kitchen restaurants. Of course in a world without white people or Jews, family structures, manually driven cars, or part-time working women - if it is up to the same globalist movement pushing veganism. Maybe not the best of foresights.

True, the growing of real meat and dairy through stem cell technology is very promising. If it is just as tasty and healthy as real meat, it is an amazing development that takes away the need for millions of farm animals to be slaughtered each year. The radicalness of the globalist agenda remains very worrying though. The production of real meat literally is a lucky windfall for the human population, because globalist elites would have pressed on regardless.

Here's kinda where we need to end this section. Despite having spotted a surprising amount of people on YouTube claiming to have cancer despite having lived "healthy" as a "vegan" [15], while chugging "healthy" chocolate-flavored Owyn "meal replacement shakes" all the way to their deathbeds, I can't make the argument that veganism is unhealthy. I can only say that a chemical blend of "healthy" "vegan" shakes containing cane sugar, monk fruit extract, pea protein, pumpkin seed protein, flaxseed oil, sunflower oil, safflower oil - heated and rancid or not - and Tapioca dextrin thickener, apparently does not stop or combat your cancer. [16]



The last four weeks of her life, straight from the hospital, pushing highly questionable vegan drinks: *"I have my own complete, clean nutrition energy drink. It was recommended by my oncologist that I keep drinking as much healthy protein as I can. And my sister found me this 2 years ago, when I was first ... diagnosed."* She had lung cancer since at least early 2020. Over a three year period, it kept spreading through all parts of her body. Conclusion: try something else than industrial vegan energy drinks to stop your cancer. If you go vegan, at least go Gerson.
Also: stand up to your doctor when he or she is not listening, because she is the 100th case or so I heard or read about in which doctors

Ironically enough, that stands in total contrast to the earlier-mentioned Gerson-esque therapy. I say "esque", because the real anti-cancer results have been reported by people seemingly only chugging down kilograms of vegetables a day. That is as extremely vegan as it comes, and it also is just about as anti-cancer as it comes. It might be even more potently anti-cancer than a whole food keto diet that includes a good degree of animal meat and fat. So there's an interesting and extreme contrast there.

essentially killed their patient: *"I'm surprised that my doctor didn't suggest checking my lungs [at an earlier stage], as I [also] had shortness of breath. But over time the [rib] pain got worse."*[14]

That immediately brings us to the question what "veganism" is. Eating rice with beans is. Only eating vegetables is. But so is consuming heated, hydrolyzed, rancid plant oils and a bucket of sugar a day - as a lot of "good citizen" vegan cancer patients seem to be doing. It's not surprising either, especially not for men, because in the absence of all dairy and meat, you are ready to eat just about anything.

Researching vegetarianism/veganism and the work of Ancel Keys versus Weston A. Price in what type of diet is the best for human health, is one of the first things that set me personally onto the "conspiracy path" back in the early 2000s. Even before that, in the 1990s, I couldn't wrap my head around the fact that a hospital flyer on "healthy food" put "cake" and "meat" into the same "bad" "saturated fat" folder. Seeing the war on meat and dairy of the modern era, this kind of fraud starts to make sense, but it always blew my mind that "professionals" and "scientists" could put out such an abysmal piece of nonsensical food advice.

However, I already explained in the beginning of this article, I can't remember any of the arguments in any detail, because anything you don't organize, simply is forgotten over time. I do remember being convinced by the work of Weston Price and how his followers discredited the work of Ancel Keys. So a largely meat and dairy-based diet, without all the plant-based oils, was the way to go for me. I've never regretted it to this day. In fact, looking at how much more expensive (actual) butter became in the 2010s, it is clear that a lot of other people started leaving behind their plant-based margarines as well, likely because even magazines as Men's Health put question-marks with non-animal fat diets.

The thing is, in order to write anything useful, I'd have to go over all the old research again. And also plenty of new research. And also dig deeper into any flawed, crooked, and-or sponsored scientific studies as we've seen with artificial sweetener sucralose. It also is a good question to ask why food additives as maltodextrin and high-fructose corn syrup even are legal. It's going to be fascinating to see how the FDA and European food authorities were able to proclaim it "safe".

That's for another day to think or write about though.

List of the most potent anti-microbial compounds

The following list is based on the Minimim Inhibitory Concentration (MIC) for the E. coli bacteria. It just gives rough numbers for effectivity against bacteria in general. The list is still premature and experimental.

Substance	E. coli bacteria MIC (mg/mL)	1 Drop MIC Exceeding	Comments on E. coli / bacteria	Kills influenza virus? MIC (mg/mL)?
Amoxicillin antibiotic	0.00006–0.032	750,000–1,400×	Depends heavily on how resistant the strains are. Given enough time, it will destroy the entire gut microbiome.	❌ No.
Garlic's allicin	0.000125–0.02	360,000–2,250×	Extremely potent and actually improves gut health. However, fleeting and hard to deliver. Ingesting and spreading through the blood is very effective, certainly to kill bacteria such as those generating stinky feet. ✅ Can irritate the skin and eaten raw will burn the mouth.	✅ Yes. Orally taken garlic can prevent influenza and aid in quicker recovery. In vitro, and with likely less effective (allicine-containing) capsules, 0.15 mg/mL *"significantly reduced the infectivity titer of Influenza B/Lee virus. [And at] 0.015 mg/mL or higher [for] the herpes complex virus..."*[17]
Cinnamon oil	0.125	360×	Can irritate skin and damage stomach lining. Dilution recommended. More expensive cinnamon bark oil might be more potent than regular cinnamon oil.	✅ Certainly in vitro, with old claims with cinnamon bark oil by at least one doctor also in humans through ingesting.
Oregano oil	0.128	350×	Can irritate skin. Dilution	✅ Certainly in vitro.

Substance	E. coli bacteria MIC (mg/mL)	1 Drop MIC Exceeding	Comments on E. coli / bacteria	Kills influenza virus? MIC (mg/mL)?
			recommended. 10 grams of dried oregano herb might contain 0.5 ml of oil.	
Grapefruit seed extract (GSE)	0.25	180×	Safe. Used in the food industry as a preservative. x100 dilution kills E. coli and Salmonella in 5s. Grapefruit juice tested as more potent against many more bacteria that GSE.	✅ Certainly inhibits avian influeza and other viruses. Even effective in Xlear nosesprays against Covid-19 coronavirus.
Acetic acid (vinegar)	0.25 (average)	1 drop of 5% vinegar (~50 µL) = ~10×	Water-based, so penetrates bacterial cells well. Irritates skin pretty quickly.	⚠️ Weak in vitro only. ❌ None in vivo.
Thyme oil	0.26	175×	Can irritate skin. Dilution recommended.	⚠️ Weak in vitro only.
Garlic oil	0.35	140×	Virtually no allicin remains. Can irritate skin. Dilution recommended.	❌ Minimal.
Clove oil	0.52	90×	Can irritate skin. Dilution recommended.	⚠️ Weak in vitro.
Castor oil	1.1	40×	Generally safe on skin, and, in short durations, the eyes. ✅	❌ None for influenza, but castor plant leave extract is antiviral to a degree against hepatitis A and such.
Eucalyptus globulus oil	1.5	30×	Can irritate skin.	⚠️ Weak vapor effect only.
Ginger oil	2.0	22×	Mild-to-moderate irritant.	⚠️ Mild in vitro effect.
Ginger extract	3.0	15×	Milder than most essential oils.	⚠️ Very mild effect.
Neem oil	3.15	14×	Generally safe on skin. ✅	❌ Minimal. However, neem bark extract is

Substance	E. coli bacteria MIC (mg/mL)	1 Drop MIC Exceeding	Comments on E. coli / bacteria	Kills influenza virus? MIC (mg/mL)?
				being researched to combat Covid.
Tea tree oil	5.5	8×	Can irritate skin. Dilution recommended.	⚠️ Weak in vitro.
Mahuka honey	178–355	0.2–0.4×	Effective in dressings at large volumes. Safe on skin. ✅	❌ None directly.

Looking at this list, there's a bit of a hierarchy in terms of the most potent anti-microbial and anti-viral natural compounds. While most may not be well-tolerated by the skin and potentially damaging to the gut, they tend to be strong across the line. It could be argued that practical medical research into these compounds has definitely been lacking.

Similarly, it becomes clear why castor oil has been so popular throughout history. Cinnamon, oregano, thyme and other oils might be able to do the same things, if only the skin (and eyes) could tolerate them over a long enough period of time.

Technically, the E. coli MIC of bleach might be around 0.25–1.5 mg/mL, but it largely kills through oxidation / dissolving and in that manner is many times more effective in killing microbes than any essential oil, garlic, and likely even amoxicillin.

HOW PEOPLE HAVE CONTROLLED OR CURED:

PSYCHE

ADHD

- Lion's mane mushroom is reported to have reduced or cured many people's ADHD, anxiety, or depression. A number of studies back up these claims.
- Ginkgo Biloba for some has a similar calming and focusing effect, although seemingly less powerful than lion's mane.

Anxiety

- See ADHD.

Depression

- See ADHD.

Sleeplessness / insomnia

- See ADHD, Lion's mane mushroom or Ginkgo Biloba might be useful for some here too.
- Ashwagandha is strongly associated with reduced stress levels and better sleep.
- The smell of lavender is strongly associated with relaxation and might help sleep as well.

Stress

- See ADHD, Lion's mane mushroom or Ginkgo Biloba might be useful for some here too.
- Ashwagandha is strongly associated with reduced stress levels and better sleep.
- The scent of Lavender is strongly associated with putting people in a more relaxed state of mind.
- If there's stress related to studying and a lack of focus, the smell of rosemary has been shown to improve memory by 15% in one study.

COMMON COLDS

Flu

- Common colds generally are caused by a variety of viruses:
  - **Influenza A & B:** ~5% or less of all "colds", but is the most severe: sudden onset of a sore theoat and headache (usually the initial symptoms), high fever with cold shivers, severe muscle aches, and profound fatigue.
  - **Rhinoviruses:** ~40–50% of colds. 160 known types. Prefer cooler nasal passages. Usually mild: runny nose with a sore throat. Generally no muscle aches.
  - **Coronaviruses (non-SARS):** ~15–30%. Cause typical cold symptoms: Sore throat, mild cough, runny or stuffy nose, sneezing and mild fatigue. Not the same as SARS-Covid-19. Generally no muscle aches.

    - **Respiratory syncytial virus (RSV):** More common in children. Can cause colds or bronchiolitis. Can be serious in infants and older adults.
    - **Other minor viruses.**
    - **Opportunistic bacteria:** The most common pneumonia-causing examples are Streptococcus pneumoniae and Haemophilus influenzae, who migrate to the lungs the second a virus inflames the throat and weakens the immune system. Not everybody has them, but eliminating them completely is not sustainable or beneficial, as their presence trains immunity and helps prevent worse pathogens.
- Supplementation during the flu with vitamin C decreases the time of sickness by 8% in adults and 14% in children, although it isn't clear whether natural or the much more common (and less effective) synthetic vitamin C was used in studies. Zinc decreases it on average by 25-33%. Vitamin D decreases and prevents it as well, according to most (but not all) studies, although exactly by how much is unknown to this author.
    - April 29, 2018, Hindawi: Evidence-Based Complementary and Alternative Medicine, 'Self-Care for Common Colds: The Pivotal Role of Vitamin D, Vitamin C, Zinc, and Echinacea' **(PDF)**.
- Maintaining very high levels of vitamin D - which most people are deficit or borderline deficit in - is increasingly touted as giving a great boost to the immune system. This author is skeptical though, as at least one study show that testosterone starts to decline beyond roughly 95 nmol/L (40 ng/mL), for which the average person only needs 800-1000 IU in daily supplementation. Similarly, compared to 400 IU (nothing in between was included), higher doses of 4,000 and 10,000 IU a day only decrease bone mineral density. 4,000 IU on average puts one at a 120 nmol/L (48 ng/mL) in 5 months, and an average of 168 nmol/L (67 ng/mL) after a year of daily supplementation. If you want to be a little higher with vitamin D, maybe aim for 125 nmol/L (50 ng/mL), which puts you in the high range of professional soccer plays in summer. It may possibly decrease your free testosterone by 1% and total testosterone by 2.5%, and slightly bring your bone density to baseline, but you *might* also just get that little bit of extra flu protection, and may just feel a bit better.
    - Nov. 7, 2011, Journal of the International Society of Sports Nutrition, 'Seasonal pattern of vitamin D in male elite soccer players': *"The concentration of 25(OH) D3 was 111.5± 30.5, 92.3 ± 30.8 and 102.5±37.1 nmol/L (Average ± DS) in autumn, winter and spring respectively. ... Parallel to the vitamin D reduction, there was another significance reduction ($p<0.05$) of BMC [Bone mineral content] from 3453.5 ± 339.4 to 3409.1 ± 278.0 g (Average ± DS) between autumn and winter."*

- Drinking Green tea while the flu goes around has been shown to lessen its manifestation in the drinker, and also lessen the duration of the sickness.
- A British doctor in 1906, before antibiotics came around, published an article in the scientific magazine The Lancet that he had non-stop success treating the flu with cinnamon bark oil, known to be among the most potent anti-bacterial and anti-viral natural substances.
- Eating fresh garlic has shown to play a preventive role as well.
- Turmeric supplementation reduces the incidence of flu sickness.
- NAC supplementation has been shown to lead to a 54% decrease in the number of people experiencing flu symptoms. It also heavily breaks down mucus, allowing people to breathe better during their sickness.
- A few grams of thyme and oregano culinary herb heavily break down mucus too.
- Experiences:
  - **Personal experience:** 5-6 weeks after beginning to daily supplement with 15,000 IU's vitamin D, 40mg of zinc, 1,000 mg of (natural) vitamin C, and 800mg of NAC, I got sick - which happens all too regularly.

    This time was odd though. It was the first "non-sick sick" sickness, and that despite it appearing to have been a serious flu. It lasted for 9-10 days, with many people in this period reporting being sick for a good 2-3 weeks. I went from the usual throat soreness (and not doing anything about it) to a very mild 1/10 headache for several days with full functionality. Right when swallowing started to become painful, thoat soreness disappeared altogether. And only for a few hours the headache went to a 2 out of 10. There was no lethargy, or general coldness, shivering, or muscle soreness. I could just continue to work, even very focused behind the PC.

    However, after 3-4 days, all of sudden there was the usual day of mucus coming out of my nose. It was a huge amount, similar to any serious disease. However, I had gone through it without symptoms. Subsequently, for 5 more days I had the lone, unusual symptom of a pure headache in various places. Some days I felt nothing, only for it to heavily return upon wake up, or after a day of working behind the PC. All in all, throughout the 9-10 days, I lost 2.5 days that the sickness was too bad to work behind a PC. But I could do any other physical job.

    It's anecdotal and we'll see in the future, but I very much suspect the supplements played a key role in managing the symptoms. I never took any of them before, except synthetic vitamin C. A blood test two weeks after the sickness passed,

showed very high 200 nmol/L (80ng/mL) vitamin D levels, and also zinc levels near the top of the range.

SKIN

Acne

- Not eating chocolate and cookies did the trick in the author's youth, but this of course does not go for everyone.
- People have success with drying out individual pimples with aloe vera, either a cream or by crushing plant leaves.
- Castor oil is seen as a miracle cure for many things, including skin problems. Try rubbing a bit on the pimples.
- Taking a zinc supplement has worked for some. This also means you might want to rid yourself of other vitamin and mineral defiencies as well.
- Other people have reported good results with supplements as DIM, Chlorophyll, NAC, or sea buckthorn oil.
- DIM even has worked in reducing steroid-derived bodybuilders' back acne. It strongly reduces estrogen.
- If nothing works, bloodwork might be useful, not just for any potential vitamin or mineral deficiences, but also for estradiol, testosterone, prolactin, and cortisol levels. See what hormones are out of whack.

Cuts, wounds, bruises, blisters, scars, and related (post-surgery) pain

- The comfrey plant not only can enormously speed up the healing of broken bones and ruptured tendons, but also the healing of any damage to the skin, new or old - essentially anything listed in this section's title. Often it is recommended to not use comfrey in open wounds, but in various animal studies this seems to work perfectly fine. Comfrey will sterilize the damaged area, break down necrotic tissue, and massively increase collagen production.
- Bromelain is regarded as a powerful supplement to fight inflammation and reduce the healing time of cuts and bruises, on top of a host of other health benefits. It is often recommended by doctors after surgery as well.
- Castor oil is seen as extremely beneficial to anything dealing with the skin, including the healing of cuts, bruises and scars.
- Natural honey has been named as a good healer and soother of small wounds and blisters.

- Aloe Vera gel might be good for healing and pain relief, but it has not been studied here.
- In one study, a mix of 300mg of turmeric (70% curcumin extract) and 150mg boswellia, 2x a day, reduced symptoms of (arthritic) pain more powerfully than 2x a day 100mg the NSAID Celecoxib (similar in effect to Ibuprofen) - without any of the long-term side effects.
- Pain after surgery can be heightened and extended due to inflammation. If that's the case, you have to find a supplement that kills the source of the inflammation without damaging surrounding skin or organs. Countless supplements listed here fight infections, but they fight it in different places with different efficiencies.

Sunburns, burns and ulcers

- Aloe vera tends to be the go-to plant or cream for this. It strongly removes the sensation of heat, reduces pain, represses pathogenic bacteria, and allows for increased healing. In case of a live plant, you can just crush a leaf and rub it on the affected area.
- Honey Lavender Magic is mentioned as a natural alternative.

Dry, flaky skin

- A skin that is dry often does not remoisturize by itself. This author once had rubber-like skin in his ears for 2 months after repeated use of vinegar to (succesfully) get rid of an infection, under the assumption that over time the skin would recover by itself. It didn't. It quickly did though after applying olive oil or coconut oil for 2-3 days. After that, the skin felt normal again.
- Castor oil is seen as extremely beneficial to anything dealing with the skin, but cannot be used all the time, in contrast to olive and coconut oil.
- People will have to experiment with finding out which oil is best for their skin, but non-irritating oils tend to be a good way to go.
- Also, not drinking enough water per day - or maybe not ingesting any collagen - can at the very least affect the way the skin looks.

Thin eyebrows/lashes

- Castor oil is seen as a miracle cure here.

Eczema

- Inflammatory skin condition.
- Various people rub aloe vera on eczema, claiming it heals this condition faster.
- Ozonated olive oil, which contains additional oxygen, has been used with success to combat eczema.

Dandruff / seborrheic dermatitis

- The author can guarantee that his own version of qigong can cure both dandruff and the more severe seborrheic dermatitis. Restore the flow of the meridian system and homeostatis returns to the skin, including putting the Malassezia yeast causing this back under control.
- However, this is not a qigong article. So castor oil might control some it, if only the inflammation and itches. However, it could also make it much worse, because Malassezia loves to feed on the type of fatty acids castor oil provides. In that case, jojoba "oil" (really a wax similar to what's found on the human skin) or vaseline at the very least doesn't provide any food to this yeast, while hydrating the skin.
- Sometimes the dandruff / seborrheic dermatitis actually is caused by using the wrong moisturizers / oils on the skin on a daily basis, so jojaba can be a major solution here.
- However, with the author it's actually the daily "stress" of studying intensely for 14 hours or more a day that causes dandruff / seborrheic dermatitis, necessitating qigong work to undo it again. If the authors just does gaming behind the PC, or watches video: no issues with dandruff / seborrheic dermatitis appearing. So the advice here would be to maybe change your job or other daily activities.
- Other cures:
  - **Reddit comment on ear dandruff/itching:** *"An ENT years ago gave me a cream that I literally put the tiniest amount in my ear with my finger... Not in the ear canal just around the inside where it's super itchy... One tube lasts me years that how small an amount you need... I'll post the name when I get home. I couldn't live without it. ... Betamethasone Valerate Ointment 0.1% LIFESAVER 🥲 I literally just touch some of it, you can't even see it on my finger and then put that inside where it's so itchy... Then don't touch it and within a few hours it's either all gone or on its way 🥰"*

Psoriasis

- Can look quite similar to dandruff / seborrheic dermatitis, discussed above, but is driven by T-cell overproduction of skin cells, and not a yeast that grows out of control. The same tips my be the solution though. In addition to what is mentioned below.
- Jan. 4, 2019, Journal of Steroid Biochemistry and Molecular Biology, 'Daily oral dosing of vitamin D3 using 5000 to 50,000 international units a day in long-term hospitalized patients: Insights from a seven year experience': *"In the 1930s and 1940s reports were published describing the successful use of vitamin D in treating psoriasis [14]... In 2010, a study from Ireland reported 25OHD blood levels measured before and after using narrow band UVB phototherapy to treat 29 patients with psoriasis in the wintertime in Ireland, and were compared to 29 age-matched untreated control patients with psoriasis [43].*
  The median baseline 25OHD level was 23 ng/ml, with a range of 9–46 ng/ml in the treatment group. All patients responded to treatment with phototherapy within 25–118 days with essentially complete clearing of their skin, at which time 25OHD blood levels were again measured. The median 25OHD blood level increased to 59 ng/ml in the treated group, with a range of 32–112 ng/ml, while no change in either disease severity or 25OHD blood levels were observed in the control group."
- Some people have seen psoriaris reduce and go away with NAC.
- Castor oil is seen as extremely beneficial to anything dealing with the skin. It might help.

AIRWAYS

Asthma

- In one study 300mg of boswellia extract taken 3x a day showed a reduction in symptoms in 70% of bronchial asthma patients, compared to 27% in the control group. Boswellia can be very effectively mixed with turmeric/curcumin in the treating of inflammation. Considering turmeric on its own has also demonstrated to improve symptoms of asthma, this could be a potent mixture for this disease too.
- 10,000 IU+ a day of vitamin D has been used to get it under control.
  - Jan. 4, 2019, Journal of Steroid Biochemistry and Molecular Biology, 'Daily oral dosing of vitamin D3 using 5000 to 50,000 international units a day in long-term hospitalized patients: Insights from a seven year experience': *"In the 1930s and 1940s reports were published describing the successful use of vitamin*

D in treating ... asthma [15]... Doses ranging from 60,000 to 300,000 IUs were shown to control asthma [15]..."

- Onions, and certainly turmeric and NAC have helped for some with asthma, sometimes fully taking it away. Example testimonies:
  - **YouTube comment:** *"Turmeric with black pepper changed my life! No asthma, no allergies, no stomach issues."*
  - **YouTube comment:** *"As a lifelong asthma sufferer, I can attest too the fact that I am now at 1-1/2 years of not having to take so much as one puff off a rescue inhaler, or ADVAIR (Corticosteroid) thanks to NAC. As you stated it is a game changer."*
- Various people have reported that the comfrey plant can help alleviate asthma.
- Traditional vitamin supplementing doesn't seem to work well against asthma:
  - Feb. 2011, Journal of the American Dietetic Association, 'Diet and asthma: nutrition implications from prevention to treatment': *"It has been hypothesized that the increase may be due to changing antioxidant intake, increasing dietary ratio of n-6:n-3 polyunsaturated fatty acids (PUFA), and vitamin D deficiency (and supplementation). Observational studies have reported associations between asthma and dietary antioxidants (vitamin E, vitamin C, carotenoids, selenium, polyphenols, and fruit), PUFA, and vitamin D. However, supplementing the diets of adults with asthma with antioxidants and n-3 PUFA has minimal, if any, clinical benefit."*

Bronchitis

- Possibly largely the same cures as asthma. In particular with NAC supplementation a lot of bronchitis sufferers report that it went down or fully disappeared.
- Chewing on a quarter teaspoon of thyme, smelling it, steaming an extract and inhaling it from there, or putting it in tea, seems to open up the sinuses and reduce bronchitis symptoms.
- Various people have reported that the comfrey plant can help alleviate bronchitis.

Sinusitis

- NAC tends to reliably break down all mucous stuck in the sinuses, if need be at (still safe) 10,000mg per day doses. Personally I found

NAC to be many times more effective and pleasant than corticosteroid nose sprays, as discussed in the ear infection section.

- Chewing on a quarter teaspoon of thyme, smelling it, steaming an extract and inhaling it from there, or putting it in tea, seems to open up the sinuses and reduce bronchitis symptoms.
- Oregano and even more oregano oil pills mixed with food (as it is very potent stuff) seems to powerfully open up the sinuses:
- **This author:** I have definitely noticed again and again that a combination of a few grams of thyme and oregano sprinkled on raw nuts, causes a few bouts of sneezing and a major loosening of mucous. It partly runs down my throat in a different way than NAC, which fully liquifies mucous. This also happens with thyme and-or oregano, but part of the mucous tends to remain more clumpy as you feel it coming lose. You tend to swallow a few more of those clumps. Thyme-oregano may also predominantly target slightly different areas of the sinuses than NAC: higher up in and behind the nose, which may also explain the sneeing that I have never had with NAC. In general, it seems to boost the strength of NAC by itself, even large 5-10 gram doses of NAC.
- Ingesting cayenne pepper or chili.
- Quercetin and bromelain should help in reducing any inflammation in the sinuses.
- Repopulating the sinuses with good bacteria seems to be possible with Kimchi's unique Latilactobacillus sakei probiotic (seemingly the result from adding garlic to the fermentation process). You can simply rub kimchi superficially in the nostrils, from where the Latilactobacillus sakei in particular starts making its way up the nose. Make sure your kimchi is organic and contains garlic. Ideally you buy traditional Korean probiotics.
- A nasal red light therapy device could help you rebuild your mucus membranes and reduce inflammation.

Nasal polyps

- The nattokinase supplement seems to be able to strongly reduce nasal polyps, with Kimchi's unique Latilactobacillus sakei probiotic (seemingly the result from adding garlic to the fermentation process) being able to repopulate the sinuses with good bacteria to prevent them from recurring.

EARS

Ear infections

- Ear infections can have different causes, and be located in the outer ear (canal), in front from the ear drum (by far the most common); the middle ear, behind the ear drum (possibly due to chronic sinusitis); and even in the inner ear.
- Basic bacteriological outer ear infections:
  - The best long-term home remedy this author has found is mixing a little bit of salt with olive or coconut oil. Salt won't kill every type of infection, but it is relatively gentle (especially in pH-neutral oil that hydrates the skin while salt is drying it out) and can kill many types of infections while lingering in the ear for days - until it is absorbed. The first time you might hear tons of popping sounds as the mixture moves to untreated parts of the ear. It can also lead to painful skin afterwards the first time, but at least with this author, this was only the first time. Do keep applying the oil in days after without the salt until every feels good again.
  - Traditional home remedies for ear infections have included 3-4% vinegar, 3% hydrogen peroxide, and 70-98% alcohol. These actually kill bad bacteria and viruses a whole lot quicker than often rather expensive pharmacy drops the doctor prescribes and you often are supposed to take for two weeks, three times a day.
  - If you use any of these home remedies, make sure to always follow it up with coconut oil or olive oil. Not only are these oils mildly antimicrobial, if you don't do this and the infection takes a while to disappear, the skin of your ear sooner or later will guaranteed turn into rubber. It will stay that way for months and years on end, unless you treat it with oil for a few days. That "rubberizing" of your ear channel, and undoing it, is not theory: this author has experienced it. You really should use natural oil right from the start, because it will prevent your ear from becoming hyper-sensitive and swelling up whenever you use substances as vinegar, hydrogen peroxide, or alcohol. This sensitivity can take weeks or months to develop, but once it's there, it's not easy to get rid off - if at all.
  - Alcohol, especially the 90%+ variant (but really all alcohol), really should be avoided, unless it's an acute situation and nothing else is available. It's very aggressive and within a couple of applications, your skin not only will dry up and get irritated, but also swell up, closing up your ear channel - which subsequently might be very hard to open up.
  - Olive oil, which can be used indefinitely without doing damage it appears, can sometimes be used in the long run to control any infection from spreading. It certaily keeps the skin supple, and will quickly restore any dried-out skin.

- Even when using olive oil or coconut oil every day, your ear should not clog up. The oil just gets absorbed over a period of a few hours. This author has dripped both oils into his ears for a long time without the slightest build up. It's not a guaranty though with other people, so always be careful.
- Salt water can sometimes be used to kill the microbes - if they happen to be sensitive to salt. Not all microbes are of course, considering plenty are to be found in the sea as well. Watch out though. Water often is left deep in the ear, loses its salt, and starts a new infection that quickly requires vinegar or something else to get under control again. Even with salt water it is important to use olive oil after. Or flush the ear once every few days. Salt water can lead to heavy itching sensation within a few weeks of daily use. The pH of salt water also is more acidic than pH-neutral olive or coconut oil.
- Coconut oil has slightly different, mild anti-microbial properties than olive oil, and could be tried first for a few weeks, or as maintenance and protection in the long run. In colder climates it first needs to be molten though, as it will be solid at room temperature.
- Warming up the oil close to body temperature will make it run in easier, deeper, and will guaranty that any dizziness is purely due to an infection; not a temperature difference. You, of course, also can warm the vinegar, hydrogen peroxide, or alcohol a bit, but obviously those substances won't have any issue running in.

- Middle ear congestion / infection, behind the eardrum:
  - These congestions / infections - especially when combined with an outer ear infection - can cause pressure on the ear drum from the inside, even tearing it. They also can lead to dizziness, temporary hearing loss due to fluid buildup, and agonizing 100+dB tinnitus. Eventually it can even destroy the vestibular system in the inner ear, giving someone permanent vertigo and-or tinnitus.
    - **Reddit comment (note: antibiotics also are ear/ototoxic and can cause lifelong tinnitus and such; evben with repeated amoxicillin there's a small chance):** *"Same thing happened to me. the infections went back and forth between my ears about 4 or 5 times even with antibiotics. destroyed my vestibular system and i now live with 24/7 vertigo. maybe i should try the castor oil* 😅*."*
  - Because of the above potential life-ruining complications, get to the doctor ASAP, as it can also take time to be allowed to visit an ENT doctor, at least in certain countries. They're likely to give you corticosteroid nose spray as mometasone to open up

your sinuses, plus either outer channel ear drops as ofloxacin (with little risk of "getting floxed"), or some kind of "mild" antibiotic as amoxicillin (they can turn your tongue yellow and destroy your digestion). If amoxicillin doesn't work, they'll likely try to take a sample to figure out what type of infection it is.

- 5,000-10,000mg of NAC a day should quickly dissolve the mucous in the nose (much quicker and easier as corticosteroids, and with no side effects), opening up the Eustachian Tube and giving trapped fluid a chance to leave the inner ear. Extra exercises:
  - You can carefully blow your nose while keeping your nose closed with your fingers to see if the Eustachian Tube pops open from the inside, allowing it the breathe. Credit goes to ChatGPT. It really helped me prove fluid was trapped in the middle ear at one point (and in combination with NAC get rid of it very quick), after an ENT doctor just sent me home after not seeing anything special anymore in my out ear canal.
  - **Reddit comment:** *"You need to:*

    - Neti pot multiple times per day - very important your water is slightly warm.

    - Yawning 50+ times per day (pull ears down when doing this).

    - Chew gum all the time -ear/head massages/jaw maneuvers. Do not eat/drink much dairy.

    - WHAT NOBODY HAS MENTIONED: Hum for 10 mins 30 times per day. Keep the same tone/sound and concentrate the hum into the ear or ears that is clogged. KEEP THE SAME PRESSURE.

    This truly saved me."
- Anti-inflammatory supplents as quercetin (found in red onions in particular) and bromelain (only found in ananas stems) - which often are combined in tablets - are recommended to decrease inflammation in the sinuses.
- Allicin of crushed garlic might help as well, but might act more systemic throughout the blood than locally in the sinuses and middle ear.

- Fungal infections of the outer ear canal:
  - These generally are Candida and Aspergillus strains. They often tightly attach to the ear drum and start spreading spores throughout the ear.
  - This likely is very hard to self-treat, especially when it involves Aspergillus. 3% hydrogen peroxide is about the only traditional "home remedy" that will kill fungi as Aspergillus Niger (black fungus) (except likely for the spores), but you only want to use

that in case of a real emergency and you can't get an appointment with a doctor in time. And maybe also no more than a few minutes at a time, followed by lots of coconut and olive oil to quickly restore the skin back to 100%.

- A lot of the natural oils listed here actually can kill Aspergillus (and certainly Candida) strains: cinnamon oil, clove oil, lemongrass oil, etc. 1-2% of these oils as part of coconut and-or olive oil should be able to kill Aspergillus. Of these, clove oil you definitely want to skip (too many reports of it being irritating, even at low doses). Lemongrass oil likely would be the least aggressive to the skin of the ear. However, it's a totally and completely experimental thought of mine, back from when I thought I might have an Aspergillus Niger infection, with worsening symptoms linked to a concurrent middle infection (110dB tinnitus at night and dizziness), and having to wait two weeks to even be allowed to visit an ENT doctor (!!).
- Your best bet (well, virtual certainty) would be to get suction clearance by an ENT doctor to remove all of the fungi's tiniest remains, followed by pharmaceutical acidic drops (to keep the good bacteria in place) or otherwise similarly pharmaceutical miconazole ear drops:
  - July 2007, Southeast Asian Journal of Tropical Medicine and Public Health, 'Suction clearance and 2% topical miconazole versus the same combination with acidic drops in the treatment of otomycosis': *"From April 2003 to September 2004, 59 ears from 55 patients received suction clearance and topical miconazole 2% (regimen 1) and in September 2004 to December 2005, 64 ears from 58 patients received the same combinations plus acidic drops [acetic acid 3% (v/v) in 97% ethanol]. The mean age of patients treated with regimen 1 was 35.76±16 years and in regimen 2 was 37.98±15 years. Aspergilus sp and Candida sp were seen in 35 (59.3%) and 24 (40.7%) cases treated with regimen 1 and in 43 (67.2%) and 21 (32.8%) cases treated in regimen 2, respectively. Relapse occurred in 2 (3.4%) ears treated with regimen 1 [miconazole], but none in cases treated with regimen 2 (p=0.228) [acidic drops]. The findings reveal that there were no statistically significant differences between the two regimens and both may be used for the treatment of otomycosis."*

EYES

Eye dryness

- Countless people have claimed that dropping pure castor oil on their eyelids or on their eyeballs has aided and cured their dry eye problems, as well as floaters, cataracts, double vision, and more.
- Omega 3 supplementation is mentioned as another, but far less miraculous solution to dry eyes.

Eye floaters

- Countless people have claimed that dropping pure castor oil on their eyelids or on their eyeballs has greatly reduced or cured their eye floaters, as well as dry eyes, cataracts, double vision, and more.
- In one Taiwanese study in which people were daily ingesting a mixture of bromelain, papain and ficin, a roughly 60-72% drop in floater reports was seen after 6 months.
- Intermittent Fasting and the more extreme Carnivore Diet have been linked by counteless people to the disappearance of eye floaters.
- Some plant-based diets seem to be able to remove floaters too, but far from all vegans report having this experiences.

Cataracts

- Countless people have claimed that dropping pure castor oil on their eyelids or on their eyeballs has greatly reduced or cured their cataracts, as well as eye floaters, cataracts, double vision, and more.
- Haven't checked glaucoma, but maybe castor oil works there too. Vitamin B3 (or nicotinamide directly) is also indicated here as a solution.

Myopia / near-sightedness

Myopia means you can't properly see at a distance. You can only see things in focus from up close to varying degrees. See ISGP's separate article on preventing vision loss and improving vision.

Nearsightedness

- Nearsightness means you can't properly see things from up close. You can only see things in focus at greater distances.
- Red light therapy and Macula Support supplements (vitamin C, E, and zinc, mixed with the lutein and zeaxanthin) might help,

especially in the early stage of losing your vision:

- Macula Support supplements consist of vitamin C, E, and zinc, mixed with the antioxidant lutein amino acid and carotenoid pigment zeaxanthin. As long as you consistently eat egg yolks, corn, or leafy green, you shouldn't have any deficiency in lutein or zeaxanthin, which can be found a lot in eye fluid.
- **Nov. 18, 2025, Joe Rogan in his podcast #2413 with Theo Von:** *"My vision's'okay. It's not as good as it was when I was young. But it's a lot better than it used to be. I started using a red light. A red light bed. Makes a giant difference, man. Huge difference. Yeah, I don't need reading glasses anymore. I needed reading glasses for a while to look at my phone. Like, with those fine texts. Yeah. I don't need it at all anymore. ... Red light therapy and certain vitamins, like lutein - there's a few different... There's a company called Pure Encapsulations. They make a formulation called Macula Support, and I take that stuff. Those two things for sure have made a big impact. I think it's the red light though more than anything. That's the big factor."*

History and details of myopia / near-sightedness

- In a nutshell, assuming you the main solution seems to be the Bates Method and more easy to comprehend evolutions of it - plus getting outdoors enough and getting enough outside-daylight into your eyes. There is no need to limit reading.
- In the absence of modern, forced child education system it appears that myopia affects somewhere between 1 and 5% of the population. This number is based on the fact that rural "village schools" in the mid 19th century had a 1% myopia rate, which didn't really manifest until the age of 15; and that the Inuit until a great reorganization of the education system in 1970s only had 5% myopia. As this type of mandatory education is introduced, and stretched out over more years (from 14, to 16, to 18, for example), myopia starts to increase in school children. Whatever the reason, the more intense the level of education, the more children develop myopia. We know, for example, that in the Far East "tiger moms" and "kiasu parents" place extreme pressure on their children to excel in school. Coincidentally, myopia has exploded to an unbelievable 80 to 90% in these societies: literally everybody is going blind:
  - Aug. 22, 2023, Wired, 'The World Is Going Blind': *"In Inuit populations, during the 1970s, myopia incidence increased from 5 percent to more than 60 percent prevalence in the span of one generation. Genetics couldn't explain such a jump. The*

sharp increase in schooling among younger Inuits, however, might."

- July 1, 2016, Scientific American, 'A World Where Everyone Needs Glasses?': *"Studies of military conscripts in Singapore [have] revealed a dramatic rise in shortsightedness: 26 percent in the late 1970s, 43 percent in the 1980s and 83 percent by the late 1990s. ... The same [situation] is true in China, Taiwan, Japan and South Korea." ... "Even with the trial we did in Guangzhou [where we recorded a 23% reduction in myopia by letting kids play 40 minutes extra outside a day]," Morgan says, "by the end of the three-year period we were starting to get pushback from parents saying, 'Look, you're wasting our children's time. If they weren't outside, they would be studying.'""*
- July 21, 2019, International Journal of Environmental Research and Public Health, 'Dose–Response Relationship of Outdoor Exposure and Myopia Indicators': *"Myopia prevalence among children in East Asian and Western countries respectively is 80–90% [3] and 2–29.4% [1]."*
- Sep. 8, 2023, CBS.nl (Netherlands), '62 procent bevolking draagt weleens een bril' (62 percent of the population sometimes wear glasses').

- In fact, with rising education levels, also in Africa, it is predicted that by 2050 half the world is blind. This likely means that the vast majority of whites will be wearing glasses, similar to Far East Asians today. The scholarly-educated Jews also suffer from high incidences of myopia.
  - Feb. 11, 2016, Ophthalmology journal, 'Global Prevalence of Myopia and High Myopia and Temporal Trends from 2000 through 2050' (over 2x more myopia and almost 4x more high myopia predicted from 2000 to 2050): *"We included data from 145 studies covering 2.1 million participants. We estimated 1,406 million people with myopia (22.9% of the world population...) and 163 million people with high myopia (2.7% of the world population...) in 2000. We predict by 2050 there will be 4,758 million people with myopia (49.8% of the world population...) and 938 million people with high myopia (9.8% of the world population...)"*
- Historical knowledge about the causes myopia:
  - Astronomer Johannes Kepler (1571–1630) noted in the early 17th century that myopia particularly was a problem among *"young people who spend a lot of time doing close work."*
  - In 1844-1845 Wiktor Feliks Szokalski (1811-1891), the "father of Ophthalmology in Poland", documented how school children between the ages of 10 and 18 at College of Charlemagne gymnasium on average went from 0 to 12% myopia during

these 8 years, with the physics and math "nerdboys" sitting at a whopping 50% myopia. Szokalski was following up on warnings from *"the authorities in Baden"*, South Germany, about *"the number of students in the gymnasia who wore spectacles."*[18]

- In 1861 Professor C. von Jäger, of Vienna, measured the eyes of 200 children and *"found fifty-five per cent of those in an orphan house and eighty per cent of the pupils in a private school, to be short-sighted."*[19]
- In 1867, Hermann Cohn (1838–1906), a professor and eye specialist at Breslau University in Prussia, cited and confirmed the findings of Szokalski in his 1867 book 'Untersuchingen der Augen von 10060 Schulkindern' ('Investigations of the Eyes of 10,060 School Children'). In addition he showed evidence that a small portion of the myopia was genetic, and also that the darker a school's classrooms were, the more myopia would develop, concluding on the existince of a *"law that the number of myopes is proportional to the darkness of the classrooms"*, conclusions made after *"examining 33 schools"*. [20] It appears these conclusions in the importance of light-filled classrooms were internationally implemented, because most schools are separated from surrounding homes, with many also having an entire wall, from top to bottom, consisting of windows. Cohn did not mention the "light law" in an 1881 Popular Science Monthly, but did give the following three and again drove home the levels of myopia epidemic:

> *"After I had gone through thirty-three schools of all grades, up to the gymnasium, containing 10,060 children, [I believe] that I was justified in announcing the three following laws:*
>
> *"1. Short-sightedness hardly exists in the village schools—the number of cases increases steadily with the increasing demands which the schools make upon the eyes, and reaches the highest point in the gymnasia;*
> *2. The number of short-sighted scholars rises regularly from the lowest to the highest classes in all institutions;*
> *3. The average degree of myopy increases from class to class—that is, the short-sighted become more so.*
>
> *"In the village schools hardly one per cent [is myopic], in the elementary schools five to eleven per cent, in the girls' schools ten to twenty-four per cent, in the real schools [i.e. modern college-level prep] twenty to forty per cent, and in*

the gymnasia [high level university prep] between thirty and fifty-five per cent...

University students have so far been examined only in Breslau and Tübingen. I found in 1867 fifty-three per cent among the Catholic theologues, fifty-five per cent of the law students, fifty-six per cent of the medical students, sixty-seven per cent of the evangelical theologues, and sixty-eight per cent of the students of philosophy, to be short-sighted. ... Dr. Gärtner, between 1861 and 1879, examined six hundred and thirty-four students of the Evangelical Theological Seminary in Tübingen, and found that seventy-nine per cent of them were myopic. ...

"It is evident that we are threatened with a great national affliction, which is likely not only to be detrimental to all peaceful occupations, but to impair the military efficiency of our people."[21]

- 1909, N. B. Harman, 'The effects of school life upon the vision of the child. Proceedings of the Royal Society of Medicine, 2 (Sect Study Dis Child)', pp. 206–16, 209: *"This excessive incidence amongst the girls [with regard to myopia] may in part be accounted for by the fact that the boys played about in the clean, wide streets, sharpening their wits and their physical faculties, whilst the girls were kept at home to help in domestic duties. That is part of the condition that tends to produce this difference in visual acuity. The other part is the nature of the work done in schools: girls do finer work, boys do no needlework; so that in vision-testing boys have an advantage, for their accommodation muscles are in a better state of tone on account of their outdoor life, and at the same time they are less fatigued by their school work. (Harman,1909)"*

- Despite the fact that Professor Hermann Cohn (1838–1906) and colleagues by 1881 had drawn the obvious conclusion that genetics (still) only plays a very small part in the cause of myopia, "genetics" still became the leading theory of myopia from 1928 on, after research on Jewish kids - a very genetically high IQ people due to a 2,000 year tradition with heavy emphasis on study and racial isolation - showed a degree of heriditary. This conclusion may well have become dominant because ophthalmology experts only make money selling glasses and lenses, and not by actually solving the root cause. Whatever the exact reason, research never really was elevated beyond conclusions drawn by 1867.
  - In his 1867 work Professor Hermann Cohn (1838–1906) already pointed out that a portion of the myopia was hereditary, but

much more strongly associated myopia with the years and level of education, and the amount of light in schoolclasses. By 1881 he had drawn the conclusion that *"Myopy is seldom congenital. All experts remark that it is rarely found in children of less than five years of age. All agree likewise that it arises from a too steady application of the eyes to close objects, especially during the school age."*[22]

The attention of the authorities in Baden was directed to this fact forty years ago, by the number of students in the gymnasia who wore spectacles. Their inquiries were followed up by Dr. Szokalsky in Paris. He did not, however, consider his investigation extended enough to justify his drawing a general conclusion."

- Aug. 22, 2023, Wired, 'The World Is Going Blind': *"In 1928, British ophthalmologist Arnold Sorsby surveyed Jewish boys in East London and discovered that they were more myopic than their non-Jewish peers. At first, he thought this was because of the extra time spent doing near work while studying holy texts. Eventually, though, he came to believe there was a genetic element to myopia. He conducted studies of twins that seemed to confirm this: The severity of myopia was more similar among identical twins than fraternal twins. The science of genetics was in vogue, and as Sorsby's theory swept away Victorian concerns about the state of the schoolhouses, it became dogma for decades. ... In the early 1990s, researchers had found that ultra-orthodox Jewish boys are more myopic than their sisters —something that was likely due to the extra studying they have to do."*
- July 1, 2016, Scientific American, 'A World Where Everyone Needs Glasses?': *"For a long time, researchers attributed nearsightedness to genetics, but this could not explain why myopia rates were so quickly reaching epidemic levels."*

- Similarly, despite Professor Hermann Cohn (1838–1906) in 1867 already discounting genetics and describing in great detail that low light conditions in school classes greatly excarbate myopia in pupils, news articles of the 2010s and 2020s have proudly sung the praises of eyesight researchers as Ian Morgan, Pei-Chang Wu, Kathryn Rose, Thomas Norton, who only very moderately expanded on research more than 130 years old. Partly in the process of torturing animals, they established that:
  - bright sunlight has a habit of preventing myopia from developing;
  - this may be related to dopamine levels the sunlight generates in the eyeballs;
  - this method is not entirely foolproof;

- *"... although children in Sydney actually spent more time reading and doing near work, only 3 percent were myopic compared with 29 percent in Singapore. Australian children spent more time outdoors: more than 13 hours per week in Sydney compared with just three in Singapore. "Children in Australia actually did more near work because they read for pleasure, whereas the children in Singapore read only for school," says Morgan, who also took part in the study."*[23]
- Taiwan started to reverse myopia in elementary school children with its 2010-launched "Tian Tian 120" program, stipulating that children should spend two hours outside per day. Myopia peaked in 2011 with 50%. In 2015 it had dropped to 46.1%, only to increase again during Covid in 2020-2022. [24]

- Important modern observations have nevertheless been made:
  - "High myopia" (-6 or more) is dangerous, as it increases the risk of *"retinal detachment, cataracts, glaucoma and other conditions that can lead to blindness"*[25] and that *"High myopia is now the leading cause of blindness in Japan, China, and Taiwan."* [26] Considering the earlier-sourced prediction that almost 1 billion people are likely to be "high myopes" by 2050, the world quite literally is going blind.
  - Research has shown that for every schoolyear that myopia is delayed, the end result later in life is 0.75 diopters less. This is also why in Taiwan's Yilan County screenings have been set up to look for "pre-myopia": the earliest signs of eyeball elongation. This is followed by a presciption of atropine combined with more outdoors play, and resulted in a *"spectacular"* 5% drop in cases of myopia in the county. [27]
- The mentioned atropine is derived from Nightshade and Mandrake: *"Nightshade has been known as "belladonna" because women in Renaissance Italy—and maybe even as far back as Cleopatra—used it to dilate their pupils to make them appear larger and more beautiful. Atropine paralyzes the ciliary muscle, which controls the size of the pupil and, for reasons scientists haven't yet pinned down, also seems to slow down the progression of myopia. (Since 2008, new treatments have become available: miSight contact lenses and MiyoSmart glasses, which arrest the growth of the eye by manipulating light patterns.)"*[28]
- Traditional ophthalmology positions on the Bates system - which teaches correct vision habits in people who apparently lost these after developing myopia, and may well be the missing link in reversing the modern myopia epidemic - are negative. At the same time they continue to have a very doomy perspective of reversing eyesight back to normal, or even slowing the progression of myopia that already has started. It also seems they really want to keep the

doctor-patient system in place with regard to eyesight, glasses or no glasses.

- 1951, The Michigan Optometrist: *"Despite the fanfare and sensational claims beginning with the Bates method prior to World War I and that which reappeared during the last war, especially among some optometric groups, there has been no scientific evidence that myopia, or any form of ametropia, or color blindness could be ... altered significantly by any form of training. To the contrary, there have been two definitive studies in recent years which indicated that the degree of myopia was not materially affected by the vision training given."*
- July 1, 2016, Scientific American, 'A World Where Everyone Needs Glasses?': *"Sunlight can protect children from developing myopia, but whether it can slow down its progression in kids who already need glasses is unclear. “The results are mixed,” Saw says. Some studies have found that outdoor time has a modest effect on progression. Others, such as Wu's study, found that being outdoors did not significantly alter outcomes for kids who were already myopic. ...*

  In Africa, for example, technology has advanced rapidly in recent years. “People have gone from no landline phones directly to mobile phones, and children are spending more time with computers,” Naidoo says. ... Unfortunately, these regions currently have limited access to eye care. Proper prescriptions are crucial—leaving blurry vision uncorrected can actually worsen progression. ...

  In Asian countries with a culture stressing academic achievement, interventions that take time away from studying may not be the best option. “Even with the trial we did in Guangzhou,” Morgan says, “by the end of the three-year period we were starting to get pushback from parents saying, ‘Look, you're wasting our children's time. If they weren't outside, they would be studying.’”"

- Ophthalmologists and eye researchers never seem to have clear answers when it comes to improving, or apparently even stabilizing myopic eyes.
- For some reason there has alwayhs been an incredible resistance to an acceptance of the Bates Method by modern "science", as well, more easily to understand, to the sungazing practice. Assuming bad eyesight simply was the result of "bad genetics" always was fine, but not the above. Despite that, it seems more and more the "scientists" are starting to draw similar conclusions.
  - July 1, 2016, Scientific American, 'A World Where Everyone Needs Glasses?': *" More recent studies ... are converging around a different idea: bright sunlight helps to regulate normal eye*

growth, and too much time indoors—whether studying, playing video games or something else—derails this process. …

The connection therefore seemed crystal clear: more education meant more time doing close work, thereby causing irregular growth. But a more detailed look at myopia research presented a hazier picture. Evidence emerged that it was the lack of time outdoors, rather than time spent doing near work, that was behind the myopia boom. A 2007 study by researchers at Ohio State University was one of the first to support this conclusion. Using survey data from the parents of 514 grade-schoolers, it found that once time spent outdoors and parental myopia were taken into account, the effect of reading hours disappeared. …

In one study, which began in 2009, a group led by Pei-Chang Wu, an ophthalmology researcher at Kaohsiung Chang Gung Memorial Hospital, conducted a clinical trial in Taiwan with 571 elementary school students. Half of the children got an extra 80 minutes of outdoors recess each day for a year. The result: only 8 percent of those students developed myopia over the course of the study, whereas 17 percent of those in the other group needed glasses. …

Morgan and his colleagues conducted a similar trial in Guangzhou, China. They found that children who received an extra 40 minutes of mandatory outdoor time every day for three years were 23 percent less likely to develop myopia than those who did not. …

Around the same time, myopia researchers in Singapore and Australia, led by Kathryn Rose, then at the University of Sydney, conducted another questionnaire-based study comparing the prevalence of myopia in six- and seven-year-olds with Chinese ancestry in Sydney and Singapore. They found that although children in Sydney actually spent more time reading and doing near work, only 3 percent were myopic compared with 29 percent in Singapore. Australian children spent more time outdoors: more than 13 hours per week in Sydney compared with just three in Singapore. "Children in Australia actually did more near work because they read for pleasure, whereas the children in Singapore read only for school," says Morgan, who also took part in the study.

Indoors, light intensity is low—a typical office or classroom provides light levels around 100 to 500 lux. In comparison, a cloudy day can provide up to 15,000 lux, and a sunny summer day can offer up to 130,000 lux. "The current thinking is that the elevated outdoor light levels raise the amount of dopamine that is being produced and released in the retina and that this is counteracting the signals for the eye to get longer," Norton says.

A group of eye researchers at the University of Tübingen in

Germany was the first to find convincing evidence for this idea. In 2009 they found that exposure to sunlight (30,000 lux) and very bright artificial lights (15,000 lux) successfully prevented experimental myopia from developing in chickens. Then, in 2010, they discovered that injecting a drug (spiperone) that blocks dopamine activity into the eyes of myopic chicks could abolish the protective effect of light. Soon after, another group found the same protective effect of light in monkeys. But dopamine is unlikely to be the whole story. A 2011 study in guinea pigs found, for example, that drugs that increased dopamine activity did not consistently prevent myopia. ...
One idea they are testing is a glass classroom, a greenhouselike structure where students can get up to 9,000 lux of sunlight. Such edifices are expensive to build, so they are also investigating another, more cost-effective option: bright study lamps that can shine up to 10,000 lux of light."

MOUTH

Bad breath

- Smelly or bad breath is generally caused by having an overgrowth of the wrong or malfunctioning sulphur-producing bacteria in your mouth, or deeper down into your throat. It can also be due to acid reflux, stomach ulcers, gum disease, nasal- or throat inflammation, sinusitis, or have other causes.
- If it is due to clogged sinuses, and-or post-nasal drip, you might want to go to that section to see how you can clear clogged sinuses.
- The first thing you might want to start doing is oil pulling with coconut oil, as it greatly reduces these bad bacteria with many people reporting an improvement or resolve with regard to bad breath. Oil pulling seems to give this author inflamed gums, but he also seems to be the only one.
- Possibly what works for smelly feet, such as raw garlic (and only RAW garlic), also works for smelly breath.
- Alternately, celery juice has been reported to work miracles:
  - **Reddit comment:** *"Celery juice has literally given me back my life. I struggled with debilitating bad breath to the point that I wouldn't feel comfortable leaving my house. I now have a boyfriend and feel comfortable socializing. But if I stop drinking it for a couple of days, the smell returns. So there definitely is something in the celery juice that is effective. Just can't say what it is or why it helps. I had tried about 100 other things over the course of 12 years to treat it any the only thing*

that provides temporary relief is this, and antibiotics. ...
It has to be ingested. The beneficial results are directly correlated to how much I drink. I've tried only having a cup or two per day - spread out over hours but the results aren't as good. ... I know the bad breath is related to bacteria though since it went away while on a course of flagyl - but it returned right after."

- Green tea has been demonstrated to work against bad breath, but only for about 20-30 minutes it appears. After an hour, all the compounds causing bad breath are active in the mouth at full force again.
- A lot of report report that after they have had their tonsils removed - which apparently can gather enormous amounts of sulfur-containing bacteria - that their bad breath either disappeared or reduced significantly, at least after the mouth was healed from the operation.
  - **Reddit comment:** *"Tonsillectomy: ... I'm Day 19 and the reason I underwent the surgery was 90% for chronic halitosis. I've had it since I was 12 and it ruined my mental health and social life. ... Once the mucus and spit accumulation stopped by day 13, I noticed a significant reduction in my bad breath! People at work don't back up from me anymore or put their hand over their nose when I talk!!!!!! "*
  - **Reddit comment:** *"I'm day eight and had them removed because of halitosis. i'm pretty certain they were the cause because i always had tonsil stones. i'll post an update... [Update after 10 months:] Hey, so my halitosis has been cured. I actually couldn't smell my bad breath, I would just see people back up and then I would ask. The one thing I could smell is my morning breath and I don't even get that anymore since the tonsillectomy."*
  - **Reddit comment:** *"Yeah I had bad breath and as the scabs are falling out I still do regardless of brushing it still is kinda bad but it is a fading smell and I'm on day 19 since the surgery."*

Gum bleeds

- Check for any tarter on your gum line, as this causes consistent gum inflammation. If it's there, carefully remove it with dental hooks. Alternately, visit a dentist or dental hygienist. You might want to start oil pulling immediately as well, as well as mixing in some salt, or using salt water in a water pik to quickly remove any additional infections.
- Alternately or additonally, you might be suffering from scurvy, a disease involving vitamin C deficiency that killed more than 2

million sailors from the 15th to 18th century.

- If that's the case, all you need is about 2 grams of vitamin C to fully replenish your body's stock for a number of weeks. Your body uses about 90mg a day of vitamin C and can store about 2 grams in various organs. Most mammals, such as dogs, can produce their own vitamin C, but humans cannot.
- Natural vitamin C is preferred over the cheap, synthetic version, but both will stop gum bleeds.
- In a personal experience, I got weak, bleeding gums after leaving my parents' house back in the day, because I thought vegetables and fruit were too expensive to buy. 1,000 mg pills of synthenic vitamin C solved 90% of the problem within days. After my immediate vitamin C stock had been replenished, I did notice that a multivitamin pill with a full range of vitamin and minerals in it, and only one-tenth the dose of vitamin C, still improved the situation a bit more though, over merely just synthetic vitamin C.
- There can be a number of other causes: from hormonal imbalances to a lack of collagen. If the latter is the case, liver sausage contains an enormous amount of collagen per gram, so eating a few grams of that per day could improve the situation. Eating a bit more meat could be a solution there. Or taking collagen supplements.
- Once the situation has improved, put together a natural, well-balanced diet.

Gum infection

- **Dentist hooks - for prevention:** Having a set of dentist hooks - both the hooks and flat ones - for many people will be absolutely key in keeping tartar from building up in certain areas, hardening, and covering the gums - which will lead to gum infection. Your teeth's surfaces are very hard, but always make sure to scrape this surface as little as possible. Focus on removing the tartar. If you do this every few weeks, the tartar also still will be quite soft. Pay attention to how your dentist and dental hygienist work with these hooks.
- **Dentist hooks - for acute infection:** If you have an acute infection, after you've eaten and cleaned your teeth, dip a dentist hook in 70% or 96% rubbing alcohol and several times run the hook through the open, infected gumline. Without pressing too hard, do this as deep as possible and over the entire length of the infection and slightly beyond. You may need to do it a few more times over the next few days to fully heal it, but you'll likely see after the first time already that the infection, and corresponding treatment pain, is quickly diminishing.

- **Waterpik plus salt water (or baking soda):** Dissolve a pinch of salt water in a waterpik and blast it straight into the infection after each meal. It's the only thing for this author that has gotten rid of two gum infections situated deep in between two teeth/molars, with not even 96% alcohol-dipped dentist hooks being able to fully dissipate the infection. Is this method painful? Yes, but it is beneficial, as the salt almost instantly dissolves biofilms and sucks out all the infected fluid. Digging into the infection with dentist hooks will be painful too.
- **Start oil pulling** with coconut oil. Many people with gum issues report miracles.
- **Baking soda brushing - for prevention:** In my case, with the aid of plaque coloring tablets, I noticed that baking soda very effectively removed plaque, much more effectively than toothpaste. It sometimes can irritate your teeth or gums though. If it irritates your gumline, you will likely end up with huge infections if you continue. You can also try to mix regular toothpaste with 25 or 50% baking soda. See what works for you.
- **Paper towel wipes:** Wipe off the teeth with kitchen towel paper after brushing them. In my case, with the aid of plaque coloring tablets, I noticed that a single wipe with paper towel very effectively removed plaque that largely stayed on the teeth after brushing with an electric toothbrush and regular toothpaste. With the paper towel you can also very easily get a bit into the nooks and crannies of your teeth along the gumline. Thinner toilet paper can be used too, but prepare for it to break apart in your mouth.

Tongue: discolored

- A white tongue, the most common occurance, is related to Candida overgrowth. Go to that section for details on how to cure this.

DIGESTION

Acid reflux

- Sometimes drinking 100 ml / 4 ounces of water with a half a teaspoon of baking soda (giving the water a very base pH) helps greatly, sometimes throughout life and until very old age without issue. This seems to be needed when too much acid is produced.
- Others had to do the opposite by ingesting a bit acid helps, in particular apple cider vinegar. This might be needed when too little acid a certain point is produced.

- If stomach ulcers are the problem, trying "vitamin U" vegetables as cabbage and kale, which can quickly heal ulcers.
- Ulcers often are tied to Helicobacter Pylori infections, which can be eradicated naturally by Senna leaves, vinegar and Mastic gum.
- Probiotics as kefir and sauerkraut might give strong reactions, but can also rebalance the gut microbiome, if only temporary, over a period of time, removing the acid reflux.
- Adding fresh garlic and turmeric to your food all can aid in the suppression and eradication of bad bacteria, as well as heavy metals, from your stomach and colon.
- You do need to figure out the foods you are most sensitive too. When you give your stomach a few days of rest by eating foods that you can tolerate, and then do 16-24 hour fasts, in between, you often can start adding more types of food. Also see which foods you can tolerate combined versus separately. In this rest and experimentation period, you may want to separate carbohydrates, protein and different types of fat as much as possible.
- Reddit tips:
  - Reddit: *"**Foods that helped me:** Baby carrots, raw broccoli, sweet potatoes, potatoes, cucumber, spinach, cabbage, red/yellow apples, oats, brown rice, black beans, avocados, egg whites, chicken breast, shrimp.*

    ***Foods that made it worse:** Anything remotely spicy (even black pepper), processed snacks, chocolate, coffee, tea, bananas, tuna, bread, fast food, fried food, pizza, fatty meats (bacon, sausage, red meat, chicken thigh), deli meats, egg yolks, soft cheese, anything high in fat/oil (mayo etc.) tomatoes, citrus, mint, milk, butter, sodas, pecans, peanuts, peanut butter, alcohol.*

    Food tricks:

    - Chew slowly and deliberately all the time. The more work your teeth do, the less work your stomach has to do.

    - I always, ALWAYS ate an apple or cucumber slices as soon as i woke up. You want your stomach acid to "chew" on things throughout the day that isn't your actual stomach. Fiberous fruit and veg is very helpful.

    - Breakfast was usually instant oats cooked with water and honey. Not appetizing but made me feel way better.

    - Eat a salad with a small amount of low cal (not acidic) dressing before eating lunch/dinner. This helps "prep" your stomach before eating a big meal.

    - Snack on raw veg in between meals if you feel it starting to flare up. Baby carrots are great.

    - Sip water throughout the day. I've heard gulping water or drinking during a meal can introduce air to your stomach

which can irritate it. I can't confirm if that's true but I followed it anyway.

- Chew a non minty, non acidic flavored gum (I found watermelon). Saliva naturally calms your stomach.

- Don't eat anything 2 hours before bed.

Non food tricks:

- Sleep sitting upright. This sucks but it really helps.

- Find a way to legitimately destress for a few moments. Stress absolutely can make acid reflux worse. I would use deep breathing and meditation after meals. Journaling helped too. Even if you don't use these tactics when you're better, it's worth a shot now.

- Light exercise is helpful. Nothing too strenuous or where you have to bend over. I took a lot of walks and found yoga youtube videos for acid reflux."

- **Reddit (Sep. 9, 2022 post):** *"I eaten a banana in the morning a day before yesterday since then i am facing acid reflux problem. Since July 2021 I have got 3-4 acid reflux symptoms. I don't know what causing it. When I am sleeping Saliva is coming out from my mouth. My heart is burning sometimes."* Answers: *"Apple cripples me with reflux and causes globus for me :/"*, *"Apples are a no go for me."*
- **YouTube comment:** *"It seems like this is not working for me, I tried taking apple cider before meals and it only made my acid reflux worse, the only thing that works for me is being on a keto diet, fat, meat, and vegetables are okay, but whenever I eat something starchy or that it has sugar in it, the acid reflux is back."*

Stomach ulcers

- Some people have reported that ingesting a comfrey tea extract or the leaves got rid of their ulcers and other digestive issues. There's a lot of scaring around comfrey being toxic by the FDA, based on theoretical science, but certainly occasional ingestion should not be a problem. Plenty of people have eaten the leaves for decades without issue.
- NAC might kill your ulcers quickly, and it will be healthy to ingest in any case. In the NAC section this author discusses taking one 800 mg NAC pill without noticing anything with his stomach. After taken an experimental 6 x 800mg = 4.8 grams therapeutic dose, there was some immediate pain in the stomach area, followed within half an hour by liquid pitch-black stool coming out - indicating blood having come into the digestion process early on in the digestive tract. Taking 6 pills over the next two days, the results were ever so

slightly less extreme. Going back to taking 1 pill a day, and trying 6 pills again 6 weeks later, there was zero issue. Even taking 10 pills: zero issue. Did I have ulcers? No clue. But something appears to not have been right initially.

Ulcer colitis

- In 2024 former UFC fighter GSP explained that he largely retired due to ulcer colitus, leading to bloody stools. He eventually was able to fully reverse all symptoms and get rid of his medication after he started intermittent fasting 8/16 hours and occasional 4-day fastings.

GI tract: chronic constipation

- Senna tea of capsules are known to work strongly against constipation.
- Psyllium husk, which almost pure soluble fiber, is a solution for many people.
- One person I noticed has her chronic constipation solved by eating a few spoonfuls of coconut oil a day.
- If it is related to imbalances in the gut microbiome, kefir and other probiotics often can help. This can take time though, initially possibly creating unpleasant effects as acid reflux and gas.

GI tract: chronic diarrhea

- Psyllium husk, which almost pure soluble fiber, has been known to help. Broken flaxseed, also with a lot of fiber (but with more non-soluble), might help as well.
- I noticed a person whose chronic diarrhea (after chemotherapy, likely because all the good bacteria in her intestines were destroyed by antibiotics) was solved by taking bromelaine supplements.
- If it is related to imbalances in the gut microbiome, kefir and other probiotics often can help. This can take time though, initially possibly creating unpleasant effects as acid reflux and gas.

Diabetes

- Diets that limit or fully eliminate carbohydrates: Carnivore-, Paleo- and the Ketogenic Diet in particular.
- Dropping all artificial foods.
- Doing a blood test to see if there are any vitamin or mineral deficiencies. Undoing a vitamin D defiency, for example, can increase insulin sensitivity.
- Moringa, berberine, and to a lesser extent raw garlic, onions, omega 3, turmeric, and capsaicin in Cayenne pepper, all are food supplements linked to improving symptoms of diabetes and pre-diabetes.
- 1.5-2 grams of Tarragon / dragon herb a day tends to see pre-diabetes and diabetes symptoms increase by 20-23% in 2 months.
- Coriander herb improves diabetes blood values.
- Drinking Rooibos tea apparently can improve insulin sensitivity through a compound only found in this tea.
- Vitamin U-containing vegetables, such as spinach, can cure diabetic wound healing.
- Comfrey salves have been reported by people to be able to prevent diabetic wound inflammation, preventing amputations.
- Black seed oil was able to increase the testosterone in diabetic rats with 70%.
- Some people have testified that R-Alpha Lipoic Acid (R-ALA) helped improve their diabetes values and certainly was able to take away their diabetic neuropathy.

Irritable Bowel Syndrome (IBS)

- IBS can have a variety of causes: chronic nervousness, probiotic imbalances, food sensitivities, parasites, Helicobacter Pylori and Candida infections, heavy metals toxicity, and more - or a combination of them. Follow the links, as far as they are available, to see how to deal with each individual issue.
- In general, you can't go wrong with at least trying NAC and (preferably 500mcg) BPC-157 oral supplements, which tend to improve IBS. You also can't go wrong with smoothies containing the ulcer-healing "vitamin U" and healthy, bad bacteria-killing natural flavorings as garlic, onions, turmeric, etc.
- Psyllium husk, which almost pure soluble fiber and feeds good gut bacteria, has been known to help. Broken flaxseed, also with a lot of fiber (but with more non-soluble), might help as well.
- Prematurely added here due to various claims that "70-80%" of IBS cases involve Small Intestine Bacterial Overgrowth (SIBO). While there is considerable overlap, this claim actually is untrue:
  - Dec. 4, 2006, study by the Swedish Medical Research Council (grant number 13409) and Faculty of Medicine, University of

Göteborg, 'Small intestinal bacterial overgrowth [SIBO] in patients with irritable bowel syndrome [IBS]': *"162 patients with IBS who underwent small-bowel [research]...*

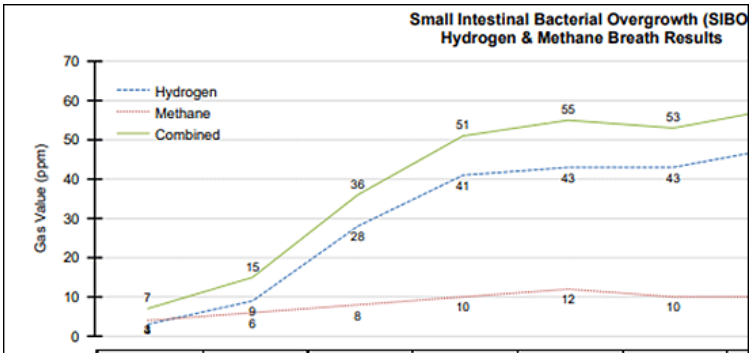
Results: SIBO (as per standard definition) was found in 4% of both patients and controls. Signs of enteric dysmotility were seen in 86% of patients with SIBO and in 39% of patients without SIBO (p = 0.02). Patients with SIBO had fewer phase III activities (activity fronts) than patients without SIBO (p = 0.08), but otherwise no differences in motility parameters were seen. Mildly increased bacterial counts (⩾5×103/ml) were more common in patients with IBS than in controls (43% vs 12%; p = 0.002), but this was unrelated to small intestinal motility. No correlation between bacterial alterations and symptom pattern was observed.

Conclusions: The data do not support an important role for SIBO according to commonly used clinical definitions, in IBS. However, mildly increased counts of small-bowel bacteria seem to be more common in IBS, and needs further investigation. Motility alterations could not reliably predict altered small-bowel bacterial flora."

- May 14, 2018, Journal of Gastroenterology (Chinese study), 'Prevalence and predictors of small intestinal bacterial overgrowth in irritable bowel syndrome: a systematic review and meta-analysis': *"Fifty studies (8398 IBS, 1432 controls) met the inclusion criteria. Overall pooled prevalence of SIBO in IBS was 38% (95% CI 32–44) and was higher among individuals with IBS (OR 4.7, 95% CI 3.1–7.2) compared with controls. The pooled prevalence of SIBO in IBS was higher in studies diagnosed by breath tests (40%, 95% CI 33–46) compared with cultures (19%, 95% CI 8–30)."*

- No additional research done, but treatment in terms of killing bad bacteria, and maintaining good health, will largely coincidence with Candida and SIBO.

Gastrointestinal tract/bugs: Small Intestine Bacterial Overgrowth (SIBO)



	Baseline	20 Min	40 Min	60 Min	80 Min	100 Min
Hydrogen	3	9	28	41	43	43
Methane	4	6	8	10	12	10
Combined	7	15	36	51	55	53

- There are three types of SIBO that a SIBO test find, all caused by different bad bacteria and archaea having migrated to the small intestine (often they find a combination of the two):
  - **Hydrogen Dominant:** Bacteria as Enterococcus, E. coli, and Klebsiella produce hydrogen. Symptoms often overlap with diarrhea IBS.
  - **Hydrogen Sulfide Dominant:** Bacteria that produce hydrogen sulfide include Citrobacter, Clostridium, Collinsella, Desulfovibrio, Escherichia, Enterobacter, Fusobacterium, Klebsiella, Prevotella, and Proteus. Symptoms often also overlap with diarrhea IBS.
  - **Methane Dominant:** Archaea as Methanobrevibacter smithii cause this gas. Symptoms show more overlap with constipation IBS.
- As discussed by "C C" lower down, it appears killing bacteria in the small intestine very often just attacking a symptom, because what is really needed is improving the peristaltic motion of the small intestine back to a normal speed, so that bad bacteria have no ability to even survive in it.
- Due to bad gasses and potentially rotten food particles being absorbed into the bloodstream, a lot of additional symptoms can come with SIBO besides gas forming: heartburn and acid reflux, nausea, fatty stools, food sensitivities and intolerances, brain fog, fatigue, joint pain, hair loss, skin symptoms as eczema, rosacea, psoriasis and rashes; depressionm and axiety, weight loss; and pain in the back, the side, or pelvic areas due to expanding gas.
- There are two aspects to getting rid of SIBO, all which have only been figured out by Redditors in the 2010s and early 2020s:
  - A kill phase for bad bacteria, which, to varying degrees wil get the peristaltic motion of the Migrating Motor Complex (MMC) of the small intestine working again. If you are NOT going to use natural herbs in this phase, and resort to traditional drugs as Xifaxan, Neomycin and Flagyl, you might to skip this phase all-together, and first try point two by itself.

- A specific focus on getting the MMC back to normal strength and motion again, so food is quickly enough pushed through the small intestine, so bad bacteria have no chance of inhabiting this part of the bowel system. Artichoke plus gember extract is known to greatly increase the motility of the small intestine, both through studies and user experience. For many SIBO sufferers, the reaction actually is too powerful, so be careful.

- SIBO kill phase with natural supplements:
  - As for eradicating the bad bacteria, the protocols here for Helicobacter Pylori and Candida should be paid attention to. The same goes for anti-parasite measures in case other protocols fail.
  - One compound not mentioned is NAC. As documented over in that section, this author personally had it remove, or 99% suppress, "something" bad from either his stomach or part of the intestine that initially caused pitch black diarrhea.
  - A lot of people have used a combination of allicin (in raw garlic or supplements), berberine and neem - twice daily - to get rid of their SIBO complaints. There seems to be no reason really why you shouldn't mix turmeric, and maybe NAC, in there as well.
  - Some people report having issues with either neem or berberine though. These could be temporary, or they could be some kind of lasting sensitivity.
  - Psyllium husk, which almost pure soluble fiber and feeds good gut bacteria, might help. Broken flaxseed, also with a lot of fiber (but with more non-soluble), might help as well.
- SIBO kill phase experiences with natural supplements:
  - **Personal note by this author:** Ever since taking 5 antibiotic pills, I've had intestinal issues with a lot of gas, leading to a lot of burping. Kefir eventually for 90-95% got rid of candida tongue and acid reflux that was tied into this, but the burping remained. Raw garlic had no effect on this. Eventually, after stopping kefir and the acid reflux and white tongue coming back over a period of 5-6 weeks (except when eating foods separately maybe), adding neem and turmeric to meals seemed to reduce the issue by near 100%, even when eating lying down. Even the burping - which started getting out of hand - got much less. Adding berberine seemed to reduce the issue further, although it is not clear if it added anything on top of the neem and turmeric. It must be said too that I did considerable work on the throat qigong-wise, leading to regular sore throats and possibly blockages being removed tied to acid reflux (blockages in the ren meridian in the upper chest certainly can be factor, personal experience says). I suspect the qigong is not

even close to the main cause of the great reduction of symptoms though.

- **Reddit comment:** *"Pretty sure a month of Neem, berberine and allicin got rid of my methane SIBO. I use it occasionally for maintenance as well."*
- **Reddit comment:** *"Took berberine for about 2 weeks and it was doing me so well. Was fixing my dysbiosis, and killing off mold in me. I then switched to neem and it wrecked my gut. More histamine and puffier face."*
- **Reddit comment:** *"Berberine, Neem, and Allicin: Has anyone done a 14 day round of the[se] supplements above for hydrogen dominant SIBO? I am currently on day 10 and I am miserable and not sure if what I've been doing is right. My diet has been my normal diet (I am gluten & dairy free), but somewhat carb heavy and High FODMAP. I have read that Dr. Pimentel recommends feeding the bacteria to make sure it's out and alive to be properly killed.*
  In addition to this I have been taking SIBO-MMC as my pro kinetic supplement and SIBOZyme before every meal (game changer for me tbh). I started these about a month before the other supplements with the low FODMAP diet. Since I've started the Allicin, Neem, and Berberine, I am constantly nauseous, have heartburn, and then just straight diarrhea (which I was dramatically constipated before the protocol). I still am a tiny bit bloated but it's nowhere what it used to be (this could be promising? Especially considering my now high FODMAP & carb heavy diet). All in all, I am doing this without a doctor. I have a friend guiding me who has cured SIBO herself with the help of a naturopath." **Follow-up reply 13 months later:** *"I did [start to feel better], they worked great. My theory was that the SIBO-MMC and SIBOZyme did wonders as well. My SIBO has come back slowly, but it was gone for about a year after this protocol."*
- **Reddit comment:** *"Berberine 500mg twice daily made my bowels perfect like nothing ever has. However it killed my DHT (strong testosterone) because it is a 5AR inhibitor. This helped my male pattern baldness, but it killed my libido, motivation, energy level, etc. So while I had perfect bowels and mental clarity, I suffered from the effects of testosterone deficiency. It sucks because it was so good for my gut. Makes me wonder if I've had SIBO this whole time."*
- **Reddit comment:** *"I've been taking Berberine for years and am a huge believer. It has a lot of research behind it for type 2 diabetes control, and that's what I started using it for as I was in the prediabetes stage. Within a few months, my blood sugar was back in fully healthy range. It also allowed me to start*

eating dairy again (I've had a good intolerance for a long time). It kills off bad bacteria and can reduce diversity, but it's helped me a ton. I will say I felt kind of shitty the first 2 weeks I took it —lot of stomach upset—but this was the die-off period."

- **Reddit comment:** *"Hi! My doc has me on a 4-week regimen of Berberine & Neem. I'm hesitant about it because I took different antimicrobials (FC Cidal and Dysbiocide, 2 years ago), which absolutely wrecked my gut/skin. From the studies, it looks like berberine doesn't have a detrimental effect on good bacteria but I'm hesitant to believe this. If you've taken berberine or neem, what have been your experiences?"* **Reply 1:** *"I've taken Berberine for a good year straight. I had no side effects."* **Reply 2:** *"I took berberine for a couple of years before I became interested in the microbiome. ... I didn't notice any effect beside pigmented bowel movements, but I also haven't experienced any dysbiosis since I adopted a WFPB [Whole-Food, Plant-Based] diet 15 years ago, so maybe no incremental GI benefit would be expected."* **Reply 3:** *"Also taken berberine for over a year. No problems."*

- SIBO peristaltic motion restoration studies:
  - Dec. 4, 2006, study by the Swedish Medical Research Council (grant number 13409) and Faculty of Medicine, University of Göteborg, 'Small intestinal bacterial overgrowth [SIBO] in patients with irritable bowel syndrome [IBS]': *"162 patients with IBS who underwent small-bowel [research]... Signs of enteric [intestinal] dysmotility were seen in 86% of patients with SIBO and in 39% of patients without SIBO (p = 0.02)."*
  - 2016, issue 1, European Review for Medical and Pharmacological Sciences, 'The effect of ginger (Zingiber officinalis) and artichoke (Cynara cardunculus) extract supplementation on gastric motility: a pilot randomized study in healthy volunteers': *"Prodigest® is the standardized combination of artichoke and ginger extracts. ... The mean gastric area at baseline was 3.2 ± 0.5 cm(2); after the meal, this figure was 8.4 ± 0.7 cm(2) with Prodigest® and 11.0 ± 1.5 cm2 with placebo (p<0.001). The after-meal gastric area was significantly smaller, with a -24% difference, following the combination of extracts, as compared with placebo (p<0.001). ... This pilot study shows that Prodigest®, a standardized extract of ginger and artichoke, significantly promotes gastric emptying in healthy volunteers without being associated with notable adverse effects."*
  - No additional research.
- Positive SIBO peristaltic motion restoring experiences with natural supplements:

- July 31, 2022 YouTube upload by "C C", 'How I Cured My SIBO "IBS" (+Gastritis, Duodenitis, NAFLD, & POTS) *w/ Brain Fog*' (note: he had very severe SIBO for 6 years): *"They've also figured out that certain herbals that do statistically, apparently, as well as even as Xifaxan, at killing massive amounts of bacteria, like FC Cidal [Thyme and other ingredients], Dysbiocide [wormwood and other herbs], CandiBactin-AR [Thyme: 183mg, Oregano: 100mg, Sage: 75mg, Lemon Balm: 50mg], -BR [Berberine: 400mg, Chinese Skullcap Root, Ginger Root], some of these things. ...*
  Ginger, if I remember, more stimulates the stomach; and artichoke more stimulates the small bowel. ... I found .... ginger and artichoke put together, into a singular pill, called Prodigest... It later got licensed off [and known as] Motility Pro. I ordered that. It wasn't even much money. And just, that was it - for me. But also for a lot of others. I see in the Subreddit, it has become quite popular. It is not the only thing, but it's a leading one. ...
  When you are taking this stuff, you are not gonna wonder whether it's working. You take it in the morning, so that it quickly gets through the stomach without wasting time and the acid eating it away. If you take it after food, it is going to sit in your stomach for a while. And you are going to taste it. You are gonna feel it. You are gonna have gurgle, gurgle, gurgle right in the dead center of your abdomen where you don't even remember what activity feels like. ... Everything started getting better. ... Everything is getting better. And it is staying better. And I had other benefits too. When I started taking that, I lost 35 pounds in a very short amount of time. ...
  There's another popular one called SIBO MMC. I heard that one was even stronger. It is a different combination of things. I think ginger is in there too."
- YouTube reply to above video: *"It worked! The artichoke and ginger treated all my symptoms of SIBO! Stimulating your gut motility so the bacteria don't have a chance to proliferate and produce gas is huge! After taking these supplements, I am not bloating and can eat. THANK YOU! from someone who has suffered for 24 years with IBS, gastritis and SIBO and has tried antibiotics, diets, herbs, and many supplements with no real long lasting help. You are an answer to prayer!"*
- YouTube reply to above video: *"Started my 8 year old son on Ginger + artichoke, after months of SIBO and crying (I was freaking out big time), this sorted it out!! YOU are angel :) Thank you soo Much!!! I had already done the H pylori test, and had him on the Oregano oil , but the motility thing is*

EXACTLY what the problem was!!!! Doctors don't have a clue, but you do!"

- **YouTube reply to above video:** *"IT WORKED!!!! after two years of depression, and SIBO issues. Finally! Thanks a million. I didn't want to send this message until I make sure it works, and I'm happy to finally be able to write it. You deserve the nobel prize."*
- **YouTube reply to above video:** *"Hi, the artichoke and ginger pills worked for me, outstanding improvement. Thank you so much."*
- **YouTube reply to above video:** *"My now 12yo has been dealing with SIBO for 4 terrible years. So many doctors, natural people, antibiotics, breath tests. After trying Motility Pro for a couple months he has gained 25lbs, has an unrestricted diet, mental health has improved significantly, and we feel like we have our son back. Again we can't thank you enough!"*
- **YouTube reply to above video:** *"i watched this yesterday and went and got natures way artichoke extract. i took it before dinner and noticed way less digestive issues that night. woke up the next morning and did a coffee enema. i released soooo much waste. way more than the normal coffee enema would have me."*

- Less positive experiences with peristaltic motion restoring experiences with natural supplements (although it does "something"):
  - **Reddit SIBO thread comment:** *"I was able to find out that i have SIBO... Doctor ... looked through my many papers, and immidiately prescribed me Rifaximin, 8 pills for 14 days (1,6 g/day). The first few days i felt really good and than the symptoms started coming back a little while still taking it. ...*
    [Now a] basic [supplement] brand, and it contains 200 mg artichoke leaf extract, 50 mg ginger extract and 8 mg peppermint oil. ... about 1 hour after lunch i felt my guts moving like crazy and after a while a really big BM [Bowel Movement], from solid to liquid (sorry for the crudeness), I went like 2-3 times after that so in total that was around my 5th BM that day. ... [Day 2:] it was one of the worst nights in a long time. My whole abdomen felt like exploding from the inside, my heart was pounding, my head felt weird, i was constantly burping even after water. ... It is the fifth day and I have decided to stop. It didn't help for the overall BM and i can feel no movement at all. My symptoms are basically back to square one with an added pain in the right side of my abdomen probably from straining." **Reply:** *"Woke up in pain in the middle of the night*

after taking it earlier in the day and the same thing happened a few days later when I kept trying. Not found an alternative..."

- Reddit SIBO thread comment: *"I am able to tolerate ginger (high dose) and make me feel great. I am able to take artichoke like 300mg a day. Then i took 7000mg. There is this European preparation. My stomach started making the mmc sound and i thought it was working. Then i got really bloated and got a lot of cravings. I am still try to recover to how i felt before. Not sure why artichoke extract would do this. Maybe the calcium fillers. But its interesting that the first reaction was mmc going in overrdive. Thank god ginger works..."*

- Then again, bad bacteria growing in the small intestine though may just be a symptom of the Migrating Motor Complex (MMC), which is what really needs to be addressed.
- July 31, 2022 YouTube upload by "C C", 'How I Cured My SIBO "IBS" (+Gastritis, Duodenitis, NAFLD, & POTS) *w/ Brain Fog*' (note: he had very severe SIBO for 6 years):
  - Doctors have all kinds of therapies for the stomach and the large intestine, but not so much for the small intestine. Doctors often are clueless with regard to symptoms. Example: *"This doctor ... basically was just like, "Oh you, you have chronic pelvic pain. We are just going to sell you these shots [to be] injected into your groin for like $18,000 a shot. ... It was a total screwjob. It was crazy. They wouldn't even let you talk to them unless you had out-of-network benefits in your insurance plan. ... I've had doctors literally tell me, ask me, to call my insurance company to find out what they are allowed to prescribe me. Who is the doctor? They are! That is the problem. Doctors don't work for us. We all think they do, but they don't. They work for the insurance companies standing over our shoulder. That is who is paying the bill."*
  - After his symtoms got worse and worse, a doctor suggested flagyl, an antibiotic for pelvic inflammatory disease, as a "quick cure". It worked great for 3 days, after which it led to such disastrous side effects that he was forced to quit.
  - Often recommended: Low FODMAP Diet (reduce fermentable food), no red meat, no gluten, etc. is generally recommended. Low FODMAP Diet leads to nutritional deficiences after 90 days. Low Fermantation Diet is a better alternative.
  - At the core, SIBO is related to the Migrating Motor Complex (MMC) of the small intestine, in particular when the peristaltic motion doesn't happen enough and powerful enough to push the food through fast enough. As a result, bacteria are able to move into and survive in the small intestine, where usually there is too much movement to do so. The bacteria start to leech onto the food, causing SIBO symptons.

- The bacteria are not the problem. They are a symptom.
- You can kill off all the bacteria, but they will just grow back.
- In some people, killing off the bacteria automatically increases strength and frequency of the Migrating Motor Complex's peristaltic motions enough for the bacteria to not come back. Or at least not for many weeks, months, or even a year-plus.
- "C C" used a drug called Xifaxan. It's the opnly thing that worked for him, but the SIBO would be back in 2 days - either because he had very severe SIBO or because the drug killed off too many good bacteria as well. Maybe both.
- For others, apart from maybe herbal remedies to kill off the bacteria, you need to add artichoke and ginger extract to increase the power of the MMC back to normal. There are even specific combined supplements for this: mainly Motility Pro.
- "C C" had a version of SIBO in which he, on top of hydrogen and methane, also was producing dilactic acid, leading to "dilactic-acidosis" or lactic acidosis (author not sure), resulting in paralyzing brain fog for every 3 minutes. This already was "life ending". Eventually it also led to Duodenitis (inflammation of the duodenum, which connects the stomach with the small intestine) and gastritis (inflammation of the stomach lining, leading to ulcers). These latter symptoms are usually caused by Helicobacter Pylori, but "C C" turned out not to have that. His problem, once again, turned out to be SIBO: now the produced gas was preventing his stomach acid from draining off quick enough after meals.
- **"C C" describing traditional "kill phase" therapies of himself and Redditers:** *"Xifaxan is cool, because it gets completely absorbed by the body before it enters the large intestine, so you don't have any of those nasty side effects, which is really neat. A cool drug. Part of why it is so expensive [$3,000-$4,000 per 60 tablets for brand medicine; about $45-$400 for generic for 60 pills]. [But] it all depends on what bacteria are going on with you. There are a zillion different ones. ... What do they do [to kill SIBO bacteria]? They'll do the Xifaxan or they'll do the Xifaxan plus Neomycin. Some people, if they put up a fight about the Neomycin, they'll do Xifaxan plus Flagyl, the thing that I was on. If none of that works, they'll do this elemental diet. Which is essentially that they give you water plus powder in it that has vitamins to keep you alive. Because the only way that you are going to starve the bacteria, is if you starve yourself. Because bacteria can eat carbohydrates [and] carbodydrates are in virtually all foods. ... So they gotta go with this extreme thing. ... Neomycin is kind of a scary drug, man. You probably will just get tinnitis - forever. Just like, "Whoa, whoops, sorry." ... They*

don't tell you that. ... I don't think a lot of people are making an informed choice about that. Their doctor is just going to go, "Oh yeah, this is what you are supposed to do. Here you go." And you might not have needed a kill phase anyway. Point is, if you can restore motility again, you're good."

- **"C C" describing his SIBO test:** *"You drink this [SIBO test] stuff that is basically a fake sugar [because] fake sugars don't get absorbed by your small intestine. They are non-digestible. That's why they are "zero carb". ... What ends up happening is, you just feed all the bacteria, because they can eat it. You can't, so you're not absorbing it through your intestinal walls - but they can. So they have a feast. So what happens, I drink this stuff. And within about 15 minutes, I was at a 10 out 10 [SIBO symptom wise]. I was done. In my brain, it was if I could have had a stroke. ... I was home alone and I was not sure if I could even breathe into the bags properly. So be aware of that. You have got to take these breath samples."*
- **"C C" on Reddit's importance:** *"I've been through all kinds of doctors. Geez, you've heard enough of it, right? ... The single most important resource I've ever had, to finally get better, was Reddit. It sounds ridiculous, but it is a freaking fact. ... There are subreddits for every disease you can think of, and they are just full of hundreds or thousands of constantly sharing their stories, and everyone kinda bouncing off each other. And if you observe it long enough, you start to see the repeating stories, and the repeating trends. And some of the outlying things to be worried about. It is not the end-all, do-all, but man, you really, really do yourself a lot of favors, if you have got a serious disease. ... One day, some guy did me the biggest favor of my life. And he went in there and he said, "If you have gastritis ... and you are never getting better ... you've gotta check out SIBO."*
- **"C C" on herbals:** *"They've also figured out that certain herbals that do statistically, apparently, as well as even as Xifaxan, at killing massive amounts of bacteria, like FC Cidal [Thyme and other ingredients], Dysbiocide [wormwood and other herbs], CandiBactin-AR [Thyme: 183mg, Oregano: 100mg, Sage: 75mg, Lemon Balm: 50mg], -BR [Berberine: 400mg, Chinese Skullcap Root, Ginger Root], some of these things. ... Ginger, if I remember, more stimulates the stomach; and artichoke more stimulates the small bowel. ... I found .... ginger and artichoke put together, into a singular pill, called Prodigest... It later got licensed off [and known as] Motility Pro. I ordered that. It wasn't even much money. And just, that was it - for me. But also for a lot of others. I see in the Subreddit, it has become quite popular. It is not the only thing, but it's a leading one. ... When you are taking this stuff, you are not gonna wonder whether it's*

working. You take it in the morning, so that it quickly gets through the stomach without wasting time and the acid eating it away. If you take it after food, it is going to sit in your stomach for a while. And you are going to taste it. You are gonna feel it. You are gonna have gurgle, gurgle, gurgle right in the dead center of your abdomen where you don't even remember what activity feels like. ... Everything started getting better. ... Everything is getting better. And it is staying better. And I had other benefits too. When I started taking that, I lost 35 pounds in a very short amount of time. ...

There's another popular one called SIBO MMC. I heard that one was even stronger. It is a different combination of things. I think ginger is in there too."

- Fatty foods slow down digestion. So be careful with that if you have SIBO (note: at least in contrast with a lot of carbohydrates).

- Extra, not researched: herbal medicine (Rikkunshito and Daikenchuto) and anti-diarrheal drug (loperamide).

Gastrointestinal bugs: Helicobacter Pylori

- We can separate the section "gastrointestinal bugs" into multiple sections. One is Helicobacter Pylori. Basic protocols often aren't necessarily all that different, except that Helicobacter Pylori requires a specific protocol beyond just "rebalancing the gut microbiome" to get rid off.
- Helicobacter Pylori is a sexually transmissable "stomach bug" (that also resides in the mouth), which causes ulcers and eventually cancer, affecting 75% to near 100% of African countries, and about 50 to near 100% of all undeveloped countries - and hence similar numbers for Third World immigrants coming into the West:
  - Dec. 1, 2018, United European Gastroenterology Journal, 'Prevalence of Helicobacter pylori infection in sexual partners of H. pylori-infected subjects': *"Results: Prevalence of H. pylori infection in sexual partners of H. pylori-infected subjects is 74.5% whereas prevalence of H. pylori infection in the control group is 32.3%. ... Members of a couple are four times more likely to be both H. pylori infected if one of the couple has reflux symptoms."* It appears the longer you are in a sexual relationship with somebody infected with Helicobacter Pylori, the bigger the chance of you getting infected as well.
  - Nov. 1, 2014, Journal of Gastroenterology and Hepatology, 'Ethnicity is a strong predictor for Helicobacter pylori infection in young women in a multi-ethnic European city': *"We*

measured IgG anti-H. pylori and CagA-antibodies in serum of pregnant women included in a population-based prospective cohort study. ... In total, 3146 (46%) of the 6837 tested women (mean age 29.7 ± 5.3) were H. pylori-positive and 1110 (35%) of them were CagA-positive. The H. pylori prevalence in Dutch women was 24%, which was significantly lower than in non-Dutch women (64%; p<0.001). In particular, H. pylori positivity was found in 92% of Moroccan (OR 19.2; 95% CI 11.8-32.0), 80% of Cape Verdean (7.6; 5.0-11.5), 81% of Turkish (9.0; 6.7-12.1), 60% of Dutch Antillean (3.3; 2.3-4.7), and 58% of Surinamese women (3.0; 2.3-3.8). Among H. pylori-positive Dutch subjects, 19% were CagA-positive compared with 40% of the non-Dutch subjects (p<0.001)."

- April 11, 2017, Proceedings of the Japan Academy, Series B, Physical and Biological Sciences, Clinics and Research in Hepatology and Gastroenterology, 'Structure and function of Helicobacter pylori CagA, the first-identified bacterial protein involved in human cancer': *"H. pylori CagA is an exogenous cancer-promoting protein that is injected intermittently into gastric epithelial cells by H. pylori. Once established, however, gastric cancer cells no longer require H. pylori and CagA for maintaining their transformed phenotype."*
- April 2013, Clinics and Research in Hepatology and Gastroenterology, 'Prevalence of Helicobacter pylori and its recurrence after successful eradication in a developing nation (Morocco)': *"[At] Hassan II University Hospital of Fez [in Morocco] patients with H. pylori infection were treated with a 1-week triple therapy or 10 day sequential therapy. Those tested urea breath test negative after 3 months of treatment were followed prospectively with repeated urea breath test at 6 months and 1 year. H. pylori status at endoscopic examination was determined by rapid urease test, histology, and culture. Results: Four hundred and twenty-nine patients were enrolled in the study, among them 324 patients (75.5%) presented with H. pylori infection. Two hundred and fifty-six (83.3%) patients had successfully eradicated H. pylori following treatment, among them, two patients (0.8%) were reinfected with H. pylori over 12 months. The rate of reinfection was 0.42% in the first 6 months and of 0.45% in the first year of the study. Conclusion: The results of the present study demonstrate that firstly, prevalence of H. pylori is high (75.5%) in our area."*

- First do a basic Helicobacter Pylori stool test, which you can buy for $10-20, giving you 2 to 3 tries.
- At least temporarily stop eating refined sugars, and possibly for a while go on a Carnivore-, Paleo- or Ketogenic Diet that excludes

almost all carbohydrates, which is what Helicobacter Pylori, like most "bad bacteria" in your intestinal tract, prefers to feed on.

- Aug. 30, 2016, Scientific Reports, 'Dietary Patterns are Associated with Helicobacter Pylori Infection in Chinese Adults: A Cross-Sectional Study': *"This study demonstrated that a diet rich in carbohydrates and sweets was positively associated with the prevalence of H. pylori infection; interestingly, a diet characterized by high intake of animal offal, animal blood, fish, seafood, and poultry was associated with a reduction of prevalence of H. pylori infection."*

- The formal protocol of eradicating Helicobacter Pylori involves a 10-day cocktail of amoxicillin and clarithromycin antibiotics, plus proton pump inhibitor drug pantoprazole. The highest success rate with this cocktail - which is bound to screw up your gut microbiome, quite possibly for life - is at most 81% with standard length therapy.
- However, a more effective natural way to get rid of Helicobacter Pylori is with Senna leaves, vinegar, or a combination of the two, which range from 92 to 97% success rate.
- Mastic gum also has a high success rate of curing Helicobacter Pylori, given a few weeks with more than 1 gram of gum a day. Using this in combination with Senna leaves, vinegar, olive oil or other Helicobacter Pylori-suppressing compounds, such as garlic or Turmeric, might be best.
- High quality extra virgin olive oil, taken at a rate of 30 grams a day, seems to have the ability to get rid of Helicobacter Pylori in about a month in at least 30% of subjects. That may mean that a regimen spanning multiple months could do so in nearly 100% of cases.

Gastrointestinal bugs: Candida

- Pay attention to the protocols to eradicate the stomach bug Helicobacter Pylori, because what kills Helicobacter Pylori also has a habit of killing Candida.
- At least temporarily stop eating refined sugars, and possibly for a while go on a Carnivore-, Paleo- or Ketogenic Diet that excludes almost all carbohydrates, which is what Candida, like most "bad bacteria" in your intestinal tract, prefers to feed on.
- Drinking the probiotic kefir. It certainly can undo the typical white candida tongue.
- Eating probiotics as Sauerkraut.
- Grapefruit peel is a potent prebiotic and kills candida.
- Someone on Reddit has claimed that the Ray Pete diet got rid of his candida, and gave additional tips: *"Grapefruit seed extract, pau*

darco, alternate those two every day at night after dinner for a week. Take activated charcoal alone, then milk thistle, cycle in that order. Honestly ray peat diet cured my candida which is mind boggling because I had it over a decade long and tried low carb paleo for YEARS. Been on Ray peat for about two months and POOF it's gone and I'm eating more carbs s than I have in my entire life. [Update:] I just take the [activated charcoal] capsules from the store- sorry not sure on dosage but I take two or one- depending on how my digestion is. I would add some fruit and foods that make you feel good back into your diet. Stress makes worse. Glycine or bone broth to heal stomach lining, marshmallow root and ginger tea help. Sorry I know this sucks, dm me if you have more questions :)"

- Candida likes alkaline environments. The gas it produces also is an alkaline one. However, baking soda still eradicates Candida:
  - Jan. 2024, issue #1, Zagazig Nursing Journal, 'Sodium Bicarbonate: A New Promising Home Strategy for the Treatment of Vaginal Yeast Infection' (a 2021 study showed the same thing): *"The current study concluded that after using baking soda, all symptom[s] of a vaginal yeast infection has been subsided."*
- Antibiotics often are the cause of Candida overgrowth, so try not to take these unless it's an absolute last resort:
  - **YouTube comment:** *"I suffered from recurring yeast infections and my OBGYN kept prescribing antibiotics/medication. I finally was able to rid of it myself by eliminating junk food, bread, sodas, juices and candy. 15 year problem was resolved in 6 months - 9 months."*
  - **YouTube comment:** *"I first got a bad candida infection after a 2 weeks course of antibiotics. Literally overnight I started getting hundreds of small, white, sticky lumps all over my face, neck shoulders and upper back. I had also become intolerant to dairy products. That was 25 years ago. I eventually cut out all dairy produce and greatly reduced my sugar intake. That was after seeking help and being put on a strict diet for several weeks to starve and kill the candida. I think back to when I raised the initial issue with my Dr and how he was adamant that the antibiotics weren't to blame. I knew he was wrong. It took me years of struggle with the infection and trying to research the condition in the attempt to find a solution. I still get very small flare ups from time to time but I think I now need to try and get rid of the issue for good. So thanks for the advice. I will introduce probiotics to my diet and will greatly reduce my carbs and sugar intake once again."*
  - **Reddit comment:** *"Finally found a treatment that works [for candida]!!! Been trying for 4 years now, my candida was messing up my bladder, and making my head foggy. ... Been*

have BM all day with all those weird looking things in it, and my bladder pain is gone.
What worked:
- HELLA BAKING SODA (4 pills at a time 4 times a day) (not for those with sodium/high blood pressure).
- PH test strips.
- Potassium Citrate.
- Sodium Bicarbonate [Soda] + Organic Grade B Maple Syrup (1 part Sodium Bicarbonate 3 parts maple syrup + water to cover) cooked on low 10 mins taken a tbs at a time a few time a day. It works like a 'Trojan horse' the SB binds to the sugars and the candida eats it and gets poisoned.
- 'Bladder Confidence' Homepathic found on amazon super cheap for 4 bottles.
- The key is to keep your ph above 7 because bad stuff can't survive in high alkalinity."

- Experiences:
  - **Personal:** This author undid his white tongue (and briefly yellow one due to antibiotics) by drinking kefir. It seems you do have to keep drinking the kefir in many cases though. Once you stop, the balance in your gut can quickly go awry again.
  - **Reddit comment:** *"I cured my SIBO [Small Intestinal Bacterial Overgrowth] with kefir and celery juice."*

Gastrointestinal bugs: Parasites

- The protocols here for Helicobacter Pylori, Candida and Small Intestine Bacterial Overgrowth (SIBO) should be enough to at least get close to having a healthy microbiome. The only compound that hasn't been mentioned yet is NAC.
- In case of parasites, you might need to use or add a few very specific compounds to get rid of them. Natural compounds that are often-recommended include Wormwood, black walnut hulls and clove.
- A more powerful compound than all of the above likely is the drug Fenbendazole. It has very little to no side effects for the vast majority of people (apart from symptoms of a parasite die off), has very low toxicity, even at high doses; and is specifically designed to kill worm-like parasites. The only issue with Fenbendazole is that it is not for human consumption. It's for dogs, cats, horses and cattle. The version for humans is Mebendazole, but is not always available without a prescription and at least most of the time is considerably more expensive. A lot of people diagnozed with cancer take Fenbendazole due to its strong anti-cancer properties, but, of course, use at your own risk.

- One YouTube user comment also mentioned how zeolite powder flushed a large worm out of his intestines.

HEART & BLOOD

Blood pressure: high

- Turmeric, Cayenne pepper and Moringa all have abilities to bring various crucial blood values back into the normal range. This includes lowering blood pressure.

Heart disease

- Vitamin K2, and in particular its MK7 variant, has been demonstrated repeatedly to improve arterial flexibility, remove non-calcified plaque, and apparently, in the long run, also reduce calcification.
- Allicin in raw garlic has similarly been demonstrated to improve arterial flexibility and at the very least remove non-calcified plaque. It also is a great blood thinner and natural antibiotic (that also attacks bad viruses, fungi, and parasites).
- Turmeric, Cayenne pepper and Moringa all have abilities to bring various crucial blood values back into the normal range.
- Be careful of low calcium levels, because this appears to be a strong predictor of heart disease.
- There's likely more, from fresh greens to exercise, but this author hasn't researched those aspects yet with regard to heart disease.
- At least some people have testified that R-Alpha Lipoic Acid (R-ALA) greatly lowered their cholesterol and other heart disease-associated values.

Thrombosis

- Some people have reported that the comfrey plant has greatly improved their thrombosis symptoms.

Varicose veins

- Some people have reported that the comfrey plant has greatly improved their varicose veins symptoms.

BONES & JOINTS

Arthritis

- Topical application of the comfrey plant can enormously speed up the healing of broken bones and ruptured tendons, and often reduce pain and inflammation related to arthritis.
- One step that often works is cutting out all refined sugar (fruits are fine for at least many/most people):
  - **YouTube comment:** *"I had rheumatoid arthritis in my hands and feet, extremely painful. I was taking methotrexate shots every week, that caused liver problems. Did some research and found out that sugar caused inflammation and is very addictive. I stopped eating sugar and stopped all my medicine and the swelling went away. No more pain, no more liver problems, no more arthritis."*
  - **YouTube comment:** *"I started a keto diet where I eliminated sugars totally. By accident my severe arthritis inflamation disappeared! I still have arthritis... It's not fun. But STOPPING SUGARS definitely reduces arthritis pain."*
- In one study, a mix of 300mg of turmeric (70% curcumin extract) and 150mg boswellia, 2x a day, reduced symptoms of arthritic pain more powerfully than 2x a day 100mg the NSAID Celecoxib (similar in effect to Ibuprofen) - without any of the long-term side effects.
- Vitamin D in extra high doses, moringa, turmeric and boswellia have been used with success on their own by people combating arthritis. Moringa seems to be particularly potent, although it still doesn't work for everybody. It could be useful to mix compounds, to see if there is an enhanced effect. Example comments:
  - Jan. 4, 2019, Journal of Steroid Biochemistry and Molecular Biology, 'Daily oral dosing of vitamin D3 using 5000 to 50,000 international units a day in long-term hospitalized patients: Insights from a seven year experience': *"In the 1930s and 1940s reports were published describing the successful use of vitamin D in treating psoriasis [14], asthma [15], rheumatoid arthritis [16,17]... Doses ranging from ... 150,000 to 600,000 IUs a day ameliorated the signs and symptoms of rheumatoid arthritis [16,17]..."*
  - **YouTube comment:** *"My wife cured her Rheumatoid arthritis in six months taking 200,000iu's of [vitamin] D3, vitamin K2, magnesium and moringa. Started in June of 2019 and by Dec her blood levels for rheumatoid arthritis were 4. Her levels were 186. Now she's on a maintenance dose of 50,000iu a day."*
  - **YouTube comment:** *"Moringa helped me for arthritis."*

- Baking soda has been used with success by some in combating arthritis, apparently by helping to detox the body:
  - **YouTube comment:** *"I learned from a old gym rat to drink soda and water before workout, it does enhance your energy increase stamina , then moved on. 8 yrs ago arthritis got bad. Aches and pain everywhere, so went back to drinking baking soda 3 times a day, beginning as I get up still asleep. I take 12 Oz [350 ml] warm distilled water and one level teaspoon baking soda, u immediately go to the can and blow it out. The urine stinks like hell. I call it flush and clean, but ... I'm 80 [and] pretty much pain free now. Been 5 yrs 3 X a day steady use . Full of energy. ... No doubt in my mind that the arthritis came from the lack of nutrients and chemicals."*
  - **YouTube comment:** *"This is a great post. A pinch or two of baking soda in 4 oz or so of cool water just makes you feel good instantly. Especially so if you have ankylosing spondylitis arthritis."*

Back pain

- Surgery and proper weightlifting might be key here. Supermans (weighted or not), reverse hypers, or just heavy standing "squats" in which you force your lower back back as much as possible to keep the lower back aliged, all can reduce lower back pain to zero, and even improve hernias.
- Topical application of the comfrey plant has demonstrated to greatly reduce lower and upper back pain, also from hernias.

Broken bones

- Topical application of the comfrey plant can enormously speed up the healing of broken bones and ruptured tendons.

Gout

- At least some people report that topical application of the comfrey plant can quickly reduce gout inflammation. Obviously you are going to need to avoid a list of foods, but this falls under mainstream medical advice.

Osteoporosis

- Weightlifting increases bone densitiy.
- Running increases bone density of the hips and legs. Cycling does not - unless maybe you have a stationary bike that you set at high resistence.
- Vitamin K2, and in particular its MK4 variant, increases bone density. Various studies show 45mg a day of MK4 increasing bone density of subjects by anything from 0.14 to 9% over the course of a year, with 58 to 62% fewer fractures occuring. Many supplements contain 200mg or more of MK4. Make sure to also get some K2 MK7, as it greatly improves arterial health.
- Vitamin D, if needed with calcium, increases bone density, either through supplements or the tanning bed. Make sure maintain your levels around 95 nmol/L / 38 ng/mL, for which on average an 800 IU daily supplement is needed. A lot of people, especially old ones, have half those numbers, and sometimes even just 25%. Higher doses of 4,000 and 10,000 IU a day, as has been demonstrated, will only decrease bone mineral density and testosterone levels.
- Topical application of the comfrey plant can enormously speed up the healing of broken bones and ruptured tendons, and might also help heal osteoporosis, although the above suggestions should not be ignored.

Tendon tears

- Topical application of the comfrey plant can enormously speed up the healing of broken bones and ruptured tendons.

RENAL SYSTEM

Kidney stones

- Kidney stone incidents are on the rise, and at least in cats have been tied to food intake:
  - kidney.org/atoz/ content/kidneystones (accessed: May 29, 2024): *"The prevalence of kidney stones in the United States increased from 3.8% in the late 1970s to 8.8% in the late 2000s. The prevalence of kidney stones was 10% during 2013–2014."*
  - 2017, Melanie Breshears and Anthony Confer, 'Pathologic Basis of Veterinary Disease' (Sixth Edition), chapter 11: The Urinary System: *"Beginning in the mid-1980s, the incidence of feline calcium oxalate calculi increased to become the most common urolith type by 2002. Then, beginning in 2003, the occurrence of calcium oxalate uroliths began to decrease progressively, most*

likely due to reformulations of feline diets that reduce urine acidity and provide adequate concentrations of magnesium."

- Not researched in detail yet. There also are different types of kidney stones, tied to varying pH values of urine:
  - **Calcium oxalate hydrate:** 70% of kidney stones. [29] Some sources say they develop in acidic urine with a pH less than 6; other say they can develop in more alkaline pHs as well. Looking deeper, the most abundant CaOx monohydrate (COM) crystals prefer an acidic pH. The less common (no percentages) CaOx dihydrate (COD) prefer an alkaline pH. These are created when calcium binds to oxalates.
  - **Calcium phosphate:** 10% of kidney stones. [30] Mainly develops in alkaline urine with a pH higher than 7.5.
  - **Uric acid:** 9% of kidney stones. Typically form in acidic urine with a pH below 5.5. Relative soft compared to calcium and cystine stones.
  - **Struvite:** 10% of kidney stones. Caused by bacteria in an upper urinary tract infection (UTI). They make the urine more alkaline and can produce struvite stones, mainly cosisting of magnesium ammonium phosphate and calcium carbon-apatite.
  - **Cystine:** 1% of kidney stones. Caused by a genetic defect. The first stones usually manifest before the age of 20.
- One thing you can do at home to get a sense of the type of stone you likely have is test your urine pH with a test strip.
- Causes include genetics, not drinking enough water, diabetes and obesity (increase acidity in the urine), foods filled with sugar, energy drinks with artificial sugar, and maybe other artificial food; various medicines, and continually eating high purine (organ meat, shellfish) or oxalate food (spinach, (roasted) almonds, etc.). Low calcium and high salt diets have also been pointed to as causes.
- People switching to health food high in oxalates (which also blocks iron absorption) are at increased risk of kidney stones. In particular, smoothies with spinach and carrots, plus a nut-rich diet (especially almonds), will quickly result in a huge increase of oxalates:
  - **Reddit comment:** *"The whole thing is frustrating. I used to eat like crap, then started eating healthy. Got kidney stones. Alot of high oxalate foods are healthy foods I've added into my diet and feel better with. Now I have to cut back on those. I cut back on the top 5 highest oxalate foods, but other than that I kind of gave up and decided to just eat what I want and increase my water and dairy intake. We'll see how it goes."*
  - **Reddit comment:** *"Same. I ate terribly for years then added tons of spinach, sweet potatoes, almonds. And black beans to my diet. Bam, three kidney stones. So now I don't eat those and feel I struggle to incorporate other healthy foods. I'm just drinking*

much more water, milk, and cut out soda. ...
No, one got stuck in the ureter and I had to have surgery. He got another one while there but I still have a 2 mm hanging out. I'm changing the diet to avoid making more or having the last one grow."

- **Reddit comment:** *"You could not have said it better. So much conflicting information out there [on the oxalate content of foods]. I started eating "healthy" due to having gout ant type 2 diabetes... Got 2 kidney stones. Most of the foods that are recommended for type 2 diabetes is on the high oxalate list or the "limit these foods if you have gout list"."*

- People have used high alkaline baking soda water (half to one teaspoon of baking soda dissolved in a glass of water) to not only purify the kidneys, but also to dissolve (high acidy) kidney stones in the long run. Even urologists recommended doing it. Possibly the baking soda also works against alkaline bacteria creating Struvite, but this speculation on the author's behalf.
  - **Reddit comment:** *"I just had a meeting with the kidney stone dietician and she said that my urine is too acidic and needs to be more basic. She said to drink 1/2 tsp of baking soda in water. ...*
    I have had 3 surgeries in my past from kidney boulders (so big in size that they never moved and gave me no pain). I have stones in both kidneys now after the last surgery that are growing again. I am also a gastric bypass patient that had the surgery 1.5 years ago."
  - **Reddit comment:** *"My urologist prescribed sodium bicarbonate [baking soda] in tablet form. You can get a big bottle of tablets from Amazon.*
  - **Reddit comment:** *"I have several kidney stones and after doing extensive lab work my nephrologist found that my citrate levels are too high and my urine is too acidic, which she thinks is causing the stones (along with genetics). She prescribed [a non working medicine, but] she said another option is to switch to sodium bicarbonate [baking soda]."*
  - **Reddit comment:** *"I was experiencing heart burn and had nothing to cure the burn. I know it's dumb, but as a home remedy I drank about a teaspoon of baking soda dissolved in some warm water. Heartburn cured and I went to sleep.*
    Next morning, I peed and noticed it was brownish yellow. Really different for me, as I usually don't have any urinairy issues. It was later that night I had my first bout of renal colic [kidney stone]. I'm wondering if baking soda helped it move, and if I should try again?"

    - **Reddit comment (trucker):** *"I've had 5 or so. ... Usually, have to drink baking soda water and cranberry juice for a few weeks if it's bad. ... With uric acid I usually have to try and stick to a gout diet. ... If you can, get the stone tested after it passes. It'll help avoid a repeat of the suffering."*
    - **Reddit comment:** *"I can only handle 1 tbs per 8 oz... and I chug it. Don't stop the chug until its empty it's brutal. I only do it if I feel dull pains in my side.. Haven't had a kidney stone in a year. Which is good but could be unrelated."*
    -
- Cranberry juice is another frequently used home remedy by people who have repeat kidney stones:
    - See above.
    - **Reddit comment:** *"Cranberry juice. Also prevent its growth by cutting sugars and oxilates out of your diet like spinach and increasing your water intake. You should be drinking at least 10 glasses a day when you have kidney problems. From a fellow stone tosser whose been weedling down 2 stones, it works."*
- Apple cider vinegar (two tablespoons added to a glass of water) or lemon juice also is frequently used (possibly for another type of stone than the one that is dissolved by baking soda; unsure atm):
    - **Reddit comment (trucker):** *"Had stones while trucking. I stopped drinking energy drinks, got some Apple Cider vinegar and water and passed a stone a little bigger than a airgun bb."*
    - **Reddit comment:** *"Did they give you Flomax? Drink the lemon juice. Jumping up and down has helped me a few times in the past [to pass the stone and take away the pain, as others confirm]. I hear that drinking beer helps."*
    - **Reddit comment:** *"It does [work, Apple Cider Vinegar]! I did it by accident. I went from drinking energy drinks to 2 liters of water and a big glass of acv lemon water daily and I had two kidney stones after 3 weeks. ... I don't think it caused them, I think they were ready to come out and it pushed them through my urinary tract after quitting the energy drinks. I had pain right under my right rib cage in the front. Cramping that came in waves. If it's a very small stone, the cramping might suddenly cease with no proof or explanation. I went to the er twice the first time I just drove home because the pain went away when I arrived. The second time, they did ultrasound and I had hydronephrosis which is water backup in the kidney but the stone was so small it wasn't visible. I felt it pass though."*
    -
- People even mix apple cider vinegar and baking soda:
    - **Reddit comment:** *"Stones at least 3 times a year. This time been passing them for 3 months straight so far. Apple cider vinegar with baking soda is the only way I make it through most days."*

- Marshmallow Root and Hydrangea have been used by people to clean out kidney stones.
- Litholyte and Moonstone are recommended by some urologists.

Urinary tract infection

- Eating grapefruit and grapefruit seed extract seems to be very effective at killing urinary tract infection-causing bacteria.

REPRODUCTION

Infertility

- Do blood work and fix any vitamin and mineral deficiences. These deficiences can sometimes lead to 50% reductions in testosterone levels, and related sperm production counts. This certainly goes for vitamin D and zinc, and possibly magnesium.
- Improve the gut microbiome, with anything from probiotics to "stomach bug"-killing and gut-lining-healing compounds, as well as heavy metal and microplastics detoxification.
- Take Tongkat Ali pills, but try to avoid the ones with heavy metal poisoning.
- Inject Chorionic Gonadotropin (HGC) to greatly increase your sperm production. It's a chemical route used all the time by bodybuilders, but it does grow the balls to just about any size you want and greatly increases corresponding sperm production.

Vaginal yeast

- Baking soda has demonstrated it can kill vaginal yeast:
  - Jan. 2024, issue #1, Zagazig Nursing Journal, 'Sodium Bicarbonate: A New Promising Home Strategy for the Treatment of Vaginal Yeast Infection' (a 2021 study showed the same thing): *"The current study concluded that after using baking soda, all symptom of a vaginal yeast infection has been subsided."*
- Assuming it is Candida, it would probably be wise to try to eradicate it from the intestines as well.

CANCER

Cancer: general

See ISGP's article on cancer.

Cancer: colon

See ISGP's article on cancer.

NEUROLOGY

Dementia

- Dementia / Alzheimer's disease to no small degree seems tied to the increased about of toxins in our environment, from factory emissions to (ground)water pollution by agricultural pesticides and microplastics.
- The forming of plague in the brain appears to be a main cause of dementia. Garlic is a key substance increasinly thought to be able to counter this build up due to its ability to cross the blood-brain barrier.
- Rosemary, acetyl L-carnitine, omega 3 are some of the substances demonstrated to have some effect in boosting memory and slowing down the progress of dementia.

MS

- Multiple Sclerosis (MS) is an autoimmune disease typified by the formation of lesions in the central nervous system (plaques), inflammation, and the destruction of myelin sheaths of neurons.
- Experiences with management/curing include daily megadoses of vitamin D and vitamin B12:
  - **YouTube comment:** *"I take 8k [UI of vitamin D2] with a medium chain fatty acid (coconut oil 1 teaspoon morning and night). I get my potassium via food and herbs. Vitamin B complexes via Nutritional Yeast and a Modified Keto diet. Been in remission for my MS now for 10 years."*
  - **YouTube comment:** *"If you've ever had Trigeminal Neuralgia, an excruciating facial nerve condition that's nicknamed "The Suicide Disease," you wouldn't think anything is too much when it comes to B12. Because of sublingual Methylcobalamin taken at 5,000 mcg dosage, my TN completely disappeared! It was nothing short of miraculous—keeping me from having to have a scheduled MVD surgery (brain surgery) at UCI in Irvine, Ca. Three years later, I am still symptom free! I still take sublingual 5,000 mcg every two days just to make sure the TN doesn't come back. Back in the 50's sublingual B12 was widely*

used for TN and MS as a first line of treatment. But then Big Pharma arose and... well you know the rest of that story. It's an all-too familiar one."

- Oct. 5, 2021, Cureus, 'Impact of Vitamin D Supplementation on Multiple Sclerosis': *"The findings from our review indicate a strong correlation between the insufficiency of vitamin D and the onset and progression of MS."*
- A study showed that 60,000 mcg of vitamin B12 a day - which is very safe to do - could effectively be used to combat the symptoms of MS.

- It appears R-Alpha Lipoic Acid (R-ALA) might be an even bigger candidate for stabilizing or improving MS, as there is an army of people testifying that it cured all kinds of neuropathy for them.
- Dr. Terry Wahls needs to be checked.

Neuropathy

- There is an army of people testifying that R-Alpha Lipoic Acid (R-ALA) greatly improved and fully cured their peripheral neuropathy for them.
- Vitamin B12 and other B vitamins might be important as well, as they can regenerate nerves in high doeses.

Trigeminal Neuralgia

- Trigeminal Neuralgia involves an irritation of the trigeminal nerve, leading to intense, stabbing, electric shock-like pain that spreads across the side of the face that is impacted.
- It appears R-Alpha Lipoic Acid (R-ALA) is an important candidate in stabilizing or improving Trigeminal Neuralgia, as there is an army of people testifying that it cured all kinds of neuropathy for them.
- Another experience with management/curing Trigeminal Neuralgia involves superdosing vitamin B12 - which is very safe to do:
  - **YouTube comment:** *"If you've ever had Trigeminal Neuralgia, an excruciating facial nerve condition that's nicknamed "The Suicide Disease," you wouldn't think anything is too much when it comes to B12. Because of sublingual Methylcobalamin taken at 5,000 mcg dosage, my TN completely disappeared! It was nothing short of miraculous—keeping me from having to have a scheduled MVD surgery (brain surgery) at UCI in Irvine, Ca. Three years later, I am still symptom free! I still take sublingual 5,000 mcg every two days just to make sure the TN doesn't come back. Back in the 50's sublingual B12 was widely*

used for TN and MS as a first line of treatment. But then Big Pharma arose and... well you know the rest of that story. It's an all-too familiar one."

REMAINING

Heavy metals poisoning

- Heavy metal poisoning can happen from tainted foods, from tainted Tongkat Ali supplements to frequently consuming wild fish; to working in industry and construction (welding, lead paints, car battery factories, etc.). Even handling lead bullets without cleaning your hands for decades on hand, as is not unusual with hunters, can result in heavy metal poisoning.
- Heavy metal poisoning is no joke. People have committed suicide over it, because they ended up largely disabled, bot mentally and physically.
- Traditionally, chelation therapy is seen as the only solution and is used by the medical industry to remove heavy metals. This also removes all the necessary minerals though, can take a long time, and can be dangerous for health.
- Natural alternatives:
  - The strongly negatively-charged zeolite has a cage-like structure which is known to vacuum up all "bad" positively-charged particles in the colon and blood that fit in it. This includes heavy metals, which are known to be excreted at higher levels from the moment zeolite is taken. Liquid zeolite mouth spray has also been considered very effective by some users.
  - Raw garlic, onions, turmeric, ginger, chlorophyll, and NAC all detox heavy metals.
  - Green tea can detox heavy metals as lead.
  - ALA seems quite potent with many additional health benefits.
  - In at least two studies, the coriander herb has been demonstrated to cross the blood-brain barrier and prevent and lead poisoning of the brain.
  - Dozens of studies have demonstrated that spirulina chelates the body from heavy metals.
  - Turmeric's curcumin at the very least protects the liver from heavy metal poisoning.
  - Natural honey - with manuka honey being your best bet - has been shown to help chelate heavy metals from the body.
  - DMSA with the Cutler protocol.
  - NAD+: *"I would also work on redox signaling. If you increase your NAD+ levels, it helps repair the DNA and detoxify*

metals..Without good NAD+ levels and redox detoxification is tough. I like a product called N-Stac and then I add shilajit and rutin."

- Milk thistle is decent for the detoxing of some metals.
- NBMI/Emeramide/OSR protocol of Boyd Haley. Reportedly very safe.
- **Reddit comment on lugols iodine:** *"Yeah I had symptoms of Mercury poisoning (odd pealing of skin in the palms) with Lugol's. It's really potent and I had to go slowly, but I think kekl13 is right it works. I've since taken comparable doses of Lugol's and had no bad reaction, leaving me to think it got the metals out for good."*
- Sauna: lead that has been drawn into the skin will be pushed out.
- Activated charcoal: Stays in digestive tract, but removes heavy metals from here.
- **Reddit comment:** *"Selenium and Silica and Vit C detox heavy metals as well."* If true, this is extremely minimal, considering I have taken these supplements plenty and when I first took a bit of zeolite, I got very dizzy, apparently due to heavy metals being picked up and moved around.
- **Reddit comment:** "Add Glycine to the NAC, NAC + Glycine has been a miracle for dealing with iron overload side effects for me due to them letting my body amp up glutathione production. "
- **Reddit comment:** *"EDTA disodium is what I use. Be careful though, too much will kill you but it works good."*
- Lemon water.
- Cayenne Pepper?

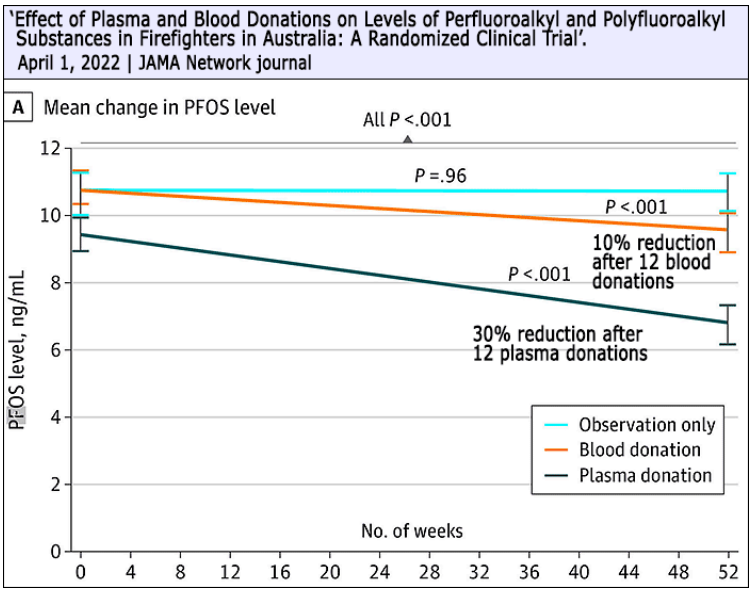
Manboobs

- Manboobs tend to be the result of high estrogen. Options to lower estrogen include:
  - Lower fat percentage. Fat in the 20%+ range often give you moobs, even without having overly high estrogen. Fat around the waste does lower testosterone and elevate estrogen though. It's not great to have.
  - Stop drinking alcohol.
  - DIM / indol-3-carbinol has quite a strong estrogen-lowering effect. This means that eating 250-450 grams / 0.5-1 pound of cooked or uncooked vegetables as broccoli and califlower is enough to lower estrogen to acceptable limits. If not, taking DIM / indol-3-carbinol supplements can make life easier. Even

moderate steroid-using bodybuilders have used it with success to lower high estrogen.
- Vitamin B complex has an estrogen lowering effect, in particular B6.
- NAC lowers estrogen as well, and might be necessary in supporting the liver to remove all the excess estrogen that is broken down by vitamin B and DIM.
- Lower copper if it has reached toxic levels. This can be done by cutting high copper food, and increasing zinc intake, generally no more than 40mg on a long-term basis.
- Calcium-d-glucarate lowers estrogen.
- Flaxseed, garlic, green tea, strawberries, raspberries, high fiber food as beans and whole grains, and fatty omega-3-containing fish all decrease estrogen.
- Potentially Alpha-lipoic acid (ALA) can be used as a (milder) alternative than NAC.

- Surgery might be an option if nothing else works.

Microplastics poisoning



- Anything that detoxes heavy metals might also grab microplastics. The strongly negatively-charged zeolite has a cage-like structure which is known to vacuum up all "bad" positively-charged particles in the colon and blood that fit in it. Microplastics usually are positively charged too, and would likely be considered "foreign" as well by the zeolite.
- Regularly donating blood and blood plasma respectively reduces microplastics in the blood by 10 and 30% a year, if 12 donations a year are given.[31]

- Reverse osmosis water filters are the best choice in filtering out micro- and nanoplastics.

Mosquitoes

- What has been tested to work:
  - **Various experimental natural oils:** These offer promising anti-mosquito properties when applied to the skin:
    - Jan. 30, 2023, Nature, 'Repellent efficacy of 20 essential oils on Aedes aegypti mosquitoes and Ixodes scapularis ticks in contact-repellency assays': *"The 10% lotion formulations that provided the longest protection from mosquito bites were clove oil, cinnamon oil, 2PEP, and geraniol with CPTs over one hour. 10% lotion formulations with peppermint, geranium, lemongrass, garlic, spearmint, or citronella oil provided CPTs for longer than 30 min... Our positive control, 10% DEET in unscented lotion, provided protection for up to six hours, at which time we stopped the experiment. We found that five of the 21 ingredients tested from the EPA 25(b) list significantly reduced mosquito attraction. Spearmint oil and garlic oil reduced mosquito attraction for 30 min, peppermint oil and lemongrass oil reduced attraction for 60 min, and cinnamon oil reduced attraction for 120 min. ... We conclude that in a 10% v/v emulsion, specific active ingredients from the EPA Minimum Risk Pesticides list can provide complete protection from mosquito bites and tick crossings for longer than one hour."*

  - **20% Picaridin spray:** Also known as Icaridin. Also protects against biting flies, ticks, fleas and lice. Synthetic compound developed in the 1980s by Bayer, and was inspired by the natural compound piperine. Initially popular in Europe and Australia, both by civilians and the Australian military. Only brought on to the U.S. market in 2005 (and recommended by the CDC), and from there increasingly popular by outdoors people. Picaridin is considered roughly as effective or even more effective than Deet, but without all the worries skin sensitivity, toxicity (it still is mildly toxic when ingested), and eating away plastics, gear and clothes. In one test 15% Picaridin protected from Aedes mosquitoes (that spread Dengue fever) for 1 hour and 4.8 hours against Culex mosquitoes that spread West Nile virus. However, in a YouTube test by 'The Bear Essentials' in which a guy let himself get stung

in a mosquito-infested wood area, 15-25% Picaridin only gave him full protection for 20-30 minutes, versus 20% Deet lasting for about 45 to 60 minutes and 30% for roughly 1.5 hours.

- **20% Picaridin lotion:** Works. Similar to the spray, but apparently protects even longer. An increasing amount of outdoors people prefer it over spray.

- **Permetrin spray:** Often used in conjunction with Picaridin. Works very well, also for ticks, but only for the clothes it's sprayed on. Ticks don't even want to attach to your clothing with it. It will stay active on your clothes for about two weeks. Do this about an hour before heading out into the woods. Permetrin does not protect your exposed hands, arms, or neck right next to them. You can also pray the Permetrin on your cotton balls that you leave around your house in spring and fall. Mice and rats will use the balls to make nests, get Permetrin on their fur, with all ticks trying to latch on to them dying. In this manner you can very strongly decrease the amount of ticks around your house in about two years.

- **Deet spray 98%:** Works. Maybe 5-6 hours of real-life full protection. Worry: Deet is very chemical, to the point it ruins plastics and eats through water-repellent layers of outdoor gear. It the highest concentrations, there are worries it affects the kidneys or reproductive areas of the body.
- **Deet spray 30%:** Works. About 1.5 hours of real-life full protection.
- **Deet spray 25% or lower:** Works. 46-60 minutes of real-life full protection max.

- Lemongrass-**Eucalyptus spray:** Worked just as good a Deet in a TV-broadcasted test: the reporter's arm was not stung at all, while with various other devices - wristbands and tone generators - he received a solid 100 mosquito bites in a short period of time. It's great for kids for being non-toxic. The question is how long it is effective. According to one researcher, the efficacy only lasts for about 30 minutes.
    - May 12, 2016 YouTube boardcast by CBS' 'Inside Edition', 'When Tested See Which Repellents Keep Mosquitoes Away Best?'.

- **Lemongrass-citronella incense sticks:** Used a lot in India. Sitting close to three sticks works well. They only last about 45 minutes each outside (and maybe 60 minutes inside), versus hours for a mosquito coil. There are 120 sticks in a package though.

    - **Eucalyptus oil:** Used a lot in Indonesia. Works well.
    - **Smoldering coffee:** Works very decent, but maybe not ideal.
    - **Mosquito coil:** Works very decent outside, but the fumes irritate the lungs.

    - **Thermacell:** Works great at getting rid of all mosquitoes in a 15 feet / 5 meter radius. It doesn't get rid of blood-sucking deer flies though. The pads used also result in some irritation in throat, so it's not too healthy.
    - **Frequency generators:** Some do seem to work, especially ones that are able to generate higher decibels in the inaudible-to-humans spectrum.

    - **High wind:** Simply doesn't allow mosquitoes to land.
    - **Smoky campfire:** The smoke keeps them away.
    - **Nets:** Speaks for itself.
- May work, or work for some:
    - Neem-based anti-mosquito spray has been getting great reviews.
    - Many frequency generators do not repeal mosquitoes at all, especially the ones that can't generate enough decibels in the inaudible-for-humans spectrum.
- What doesn't work in repelling mosquitoes:
    - Fake dragonflies stuck to your hat or clothing.
    - Planting citronella plants by themselves do nothing. The leaves need to be crushed for them to have any anti-mosquito effect.
    - Citronella candles aren't strong enough, at least not outside.
    - Citronella wristbands do absolutely nothing, also not inside.
    - Anti-mosquito patches do nothing, even when you use a whole bunch together all over your clothing.
    -

Smelly feet

- Assuming the cause is microbial, two large cloves of fresh garlic could kill even the smelliest feet for an entire day, and continues to reduce smell for a number of days. The first time one may have to crush four cloves to reduce feet odor to absolute zero within the hour. The crushed garlic is easiest to consume by mixing it with a bag of nuts, or putting it in the dinner stove immediately before serving. Garlic powder does not work, because the active, anti-microbial ingredient here is allicin, which quickly degrades by heat or leaving it out in the open for a day.

- Misting the feet and shoes with regular 3 to 4% vinegar - a potent anti-microbial - kills the smell of feet for at least a few hours. If you do this regularly, it is advised to also regular rub some olive oil onto the feet daily to keep the skin from being damaged.
- Chlorophyll neutralizes body odor in many people, but if it stops smelly feet is likely a 50-50 success rate at most.
- Improving the gut microbiome, with anything from probiotics to "stomach bug"-killing and gut-lining-healing compounds, may help, or even be the solution.

Testosterone: low

- Normal testosterone levels for men vary from below 300 ng/dL (low) to about 1100 ng/dL (very high). Generally the higher the age, the lower the testosterone, although there are active, low fat people in their 60s with with testosterone well over 600, while at the same time there are plenty of young men in their early 20s - even those who work out - with testosterone below 300.
- Build muscle and, most importantly maybe, lose fat. A person with 22% body fat and a T level of 380, at least according to one study, should have a T level of about 524 at a bodyfat of 10%.
  - Jan. 3, 2024, PLoS One journal, 'Percent body fat was negatively correlated with Testosterone levels in male': *"Specifically, testosterone decreased by 11.97 ng/dL with every 1% increase in TPF* ***[total percent fat]****, by 9.36 ng/dL with every 1% increase in APF* ***[android percent fat - i.e. mid stomach fat, above the navel]****, and by 10.29 ng/dL with every 1% increase in GPF* ***[gynoid percent fat - i.e. hip fat]****. Furthermore, for every unit increase in A/G ratio* ***[android to gynoid ratio - calculated by dividing the fat mass in kg/lb in A by G; example 1: A = 8kg, G = 10kg: 0.8 ratio; example 2: A = 20kg, G = 10kg: 2 ratio]****, testosterone levels decreased by 320.93 ng/dL [so mid/upper body fat is bad for T, also generally for health], while testosterone levels increased by 12.62 ng/dL for every 1% increase in LMP* ***[lean mass percent]****."*
    - Study: Healthy men 18-45 given 100 mg per week lost an average of 6% body fat in 8 weeks. Other studies show that testosterone enanthate is not anabolic yet at 100 mg per week.
- Do regular, strenuous cardio work outs.
- Do blood work and fix any vitamin and mineral deficiences. These deficiences can sometimes lead anywhere from 15-100% reductions in testosterone levels. This certainly goes for vitamin D and even more for zinc, and possibly magnesium. Low iron can also be an issue.

- Boron supplementation of about 10mg per day can increase testosterone.
- Black seed oil was able to increase the testosterone in diabetic rats with 70%.
- Tongkat Ali generally boosts testosterone in men by 20 to 100% if a potent enough source of eurycomanone ingredient is used. Watch out for the many potential side effects though. Bloodwork immediately before taking the supplement is necessary. From there maybe 10 days after. IF everything is fine, one or two months later again. You want to pay attention to estradiol, prolactin, and cortisol levels in particular.
- If all else fails: 120-200mg of testosterone cypionate a week, maybe with some Human Chorionic Gonadotropin (HGC) and DIM, should do the trick. Neither HGC or DIM might be needed at 200mg or lower doses. Don't expect to become giant on just TRT though. You will need to mix it with tren, deca, turinabol, or some other steroid along these lines, all with increased side effects.
  - Dec. 1, 2001, American Journal of Physiology, 'Testosterone dose-response relationships in healthy young men': *"The administration of the GnRH agonist plus graded doses of testosterone [enanthate, once per week] resulted in mean nadir testosterone concentrations of 253, 306, 542, 1,345, and 2,370 ng/dl at the 25-, 50-, 125-, 300-, and 600-mg doses, respectively. Fat-free mass increased dose dependently in men receiving 125, 300, or 600 mg of testosterone weekly (change +3.4, 5.2, and 7.9 kg, respectively)."*

VITAMINS: FAT-SOLUBLE

Vitamin A

- A deficiency can, among others things, lead to eye problems: bad and/or blurry vision and dry eyes.
- In contrast to animal sources as liver, vitamin A from vegetables as carrots cannot result in toxicity symptoms, because vegetables conatin the precursor to vitamin A: beta-carotene.

Vitamin D

'Global and regional prevalence of vitamin D deficiency in population-based studies from 2000 to 2022: A pooled analysis of 7.9 million participants'
March 17, 2023 | Frontiers in Nutrition

Figure 2. Vitamin D levels below <50 nmol/L / 20ng/mL, with <75 / <30 often still considered deficient. Global average then: 77%.

European Region		
Armenia		0·54
Belgium		0·57
Bosnia and Herzegovina		0·58
Bosnia and Herzegovina		0·57
Bulgaria		0·76
Croatia		0·58
Czech Republic		0·60
Denmark		0·52
Estonia		0·73
Finland		0·18
France		0·59
Germany		0·60
Greece		0·46
Iceland		0·65
Ireland		0·47
Israel		0·50
Italy		0·49
Kazakhstan		0·70
Luxembourg		0·56
Norway		0·32
Poland		0·84
Portugal		0·70
Romania		0·26
Russian Federation		0·46
Slovenia		0·61
Spain		0·33
Sweden		0·65
Switzerland		0·17
The Netherlands		0·30
Turkey		0·35
UK		0·55
Ukraine		0·52
Subtotal	53%	0·53

African Region		
Algeria		0·48
Cameroon		0·03
Ethiopia		0·69
Ghana		0·44
Kenya		0·07
South Africa		0·07
Uganda		0·03
Subtotal	19%	0·19

Eastern Mediterranean Regi		
Afghanistan		0·59
Bahrain		0·82
Egypt		0·73
Iraq		0·60
Jordan		0·38
Kuwait		0·84
Lebanon		0·39
Morocco		0·48
Oman		0·92
Pakistan		0·71
Qatar		0·69
Saudi Arabia		0·76
Tunisia		0·85
United Arab Emirates		0·81
Subtotal	72%	0·72

Region of the Americas		
Argentina		0·68
Brazil		0·33
Canada		0·34
Chile		0·58
Colombia		0·23
Ecuador		0·21
Guatemala		0·13
Mexico		0·25
Trinidad and Tobago		0·03
USA		0·28
Subtotal	30%	0·30

Western Pacific Region		
Australia		0·31
Cambodia		0·14
China		0·57
Japan		0·29
Korea		0·59
Malaysia		0·55
Mongolia		0·99
New Zealand		0·47
Singapore		0·42
Vietnam		0·02
Subtotal	44%	0.44

South-East Asia Region		
Bangladesh		0·70
India		0·58
Nepal		0·51
Sri Lanka		0·58
Thailand		0·13
Subtotal	57%	0·57

- 50% of the world is deficient in vitamin D when you look at blood levels lower than 50 nmol/l / 25 ng/mL (77% is below 75 nmol/l / 30 ng/mL, with 33-38 seemingly being optimal in case of testosterone levels and bone density):
  - March 17, 2023, Frontiers in Nutrition, 'Global and regional prevalence of vitamin D deficiency in population-based studies from 2000 to 2022: A pooled analysis of 7.9 million participants': *"We found that globally, 15.7%..., 47.9%..., and 76·6%... of participants had ... vitamin D levels less than 30 [12 ng/mL], 50 [20 ng/mL], and 75 nmol/l [30 ng/mL], respectively [and thus respectively "very deficient", "deficient", and "moderately deficient"] ...*
    The Endocrine Society designated the threshold of vitamin D deficiency at ≤ 50 nmol/L (20 ng/mL), the threshold of vitamin D insufficiency at 50–75 nmol/L (20–30 ng/mL), the threshold of vitamin D normal at ≥75 nmol/L (30 ng/mL) (12, 13). Nevertheless, all guidelines have reached the consensus that the value of serum 25(OH)D <25 or 30 nmol/l (10–12 ng/ml) should be averted at all ages (14)."
- Paradoxically, especially countries in the Middle East stand out as being vitamin D deficient, in no small part due to full body clothing, especially for women, with dark skin being 10x less effective at converting vitamin D from the sun than light skin:
  - June 10, 2019, Arab News, 'Sun-drenched Middle East has a high vitamin D deficiency rate. Why?': *"Research shows*

vitamin D deficiency prevalent among almost 81% of Middle East and North Africa's population. ... Cultural forms of dressing, which include covering major parts of the body, also may affect the skin's absorption of sunlight, especially for women. ... A paper published in 2011 by Floor Christie of the University of Sunderland and Linda Mason of the Liverpool School of Tropical Medicine found that women with darker complexions require two hours of sun exposure to produce the same amount of vitamin D that a woman with lighter complexion can produce in 12 minutes."

- August 9, 2007, Reuters, 'Middle Eastern women may have vitamin D deficiency': *"At the United Arab Emirates University, Al Ain, [they] studied vitamin D levels in 90 women who were breastfeeding and 88 women who had never given birth. Many dressed to cover their whole bodies, including their hands and faces, while outside of their homes. Only two of the women, one in each group, were not vitamin D deficient at study."*

- Vitamin D2 is plant-based, cheaper, and elevates vitamin D levels for a shorter duration than D3, which is animal-based. Furthermore, vitamin D obtained from the sun remains the longest in the body. Rough half-lives for vitamin D versions with blood serum levels around 50 nmol/L / 20 ng/mL (shorter half-life for values 2-3x as much):
  - **D2:** 1 week.
  - **D3:** 3 weeks.
  - **Sun:** 6 weeks.
- High levels of vitamin D can decrease magnesium levels, potentially, if magnesium drops below the threshold, leading to muscle cramps and other magnesium-deficiency symptoms.
- Supplementing vitamin D is often done in conjunction with vitamin K2 to prevent any potentially increased calcium levels from D3, especially when daily supplementing with 5,000 or 10,000 IU.
- A small portion of the population doesn't tolerate vitamin D very well and develop hypercalcemia much quicker than the majority. Sometimes problems have emerged as low as 1,500 IU, leading to international lowerings of RDAs for vitamin D, which are not realistic for the population as a whole.
- In the modern era vitamin D levels generally are classified as follows:
  - **Deficient:** Generally below 25 or 50 nmol/L (10 ng/mL - 20 ng/mL), although a lot of practitioners consider below 75 nmol/L (30 ng/mL) to be low. [32]
  - **Normal:** Above 50 or 75 nmol/L (20 or 30 ng/mL).
  - **Optimal:** 125 to 200 nmol/L (50ng/mL to 80ng/mL), and increasingly up 250 nmol/L (100ng/mL).

    - **High optimal:** 200-250 nmol/L (80-100ng/mL).
    - **Toxic:** Somewhere north of 250 nmol/L (100ng/mL), although, as *"the Endocrine Society's practice guidelines on vitamin D state"*, vitamin D toxicity *"is usually not observed until ... levels are more than 150 ng/mL [375 nmol/L]."*[33]
- While the risk of complications increases as serum vitamin D levels go up above 250 nmol/L (100ng/mL), in one vitamin D supplementation study, with the mean vitamin D level reaching 298 nmol/L (119 ng/mL), with one subject hitting 962 nmol/L 384.8 ng/ml, no observations of hypercalcemia were made. [34] A 2011 study with 3,667 participants reported no adverse effects at blood levels *"above 200 ng/dL"* and suggested that up to 40,000 IU a day likely is safe. [35] Another 2007 estimated that only above 600 nmol/L (240 ng/dL) there likeley would be a major chance of *"clinically significant hypercalcemia"*. [36] In cases of accidental massive toxicity (645 ng/mL, with calcium at 13.2 mg/dL; and another with 1220 ng/mL, and a calcium of 15.0 mg/dL), symptoms of hypercalcemia started disappearing and *"calcium levels became normal"* below 400 ng/ml. [37]
- Vitamin D serum levels from various supplementation studies (keep in mind that tiny women can be at 240 nmol/L (100 ng/mL) with just 2,500 IU, while a 200lb man generally needs about 10,000 IU a day:
    - **400 IU a day:** 75 nmol/L (30 ng/mL) on average after 2.5 months, and an average max of 78 nmol/L (31 ng/mL) after 3 years or more of daily supplementing. [38]
    - **800 IU a day:** 80 nmol/L (32 ng/mL) on average short term and around 95 nmol/L (38 ng/mL) long term. It is generally guaranteed to be above 50 nmol/L (20 ng/mL) for almost anyone. [39]
    - **1,000 IU a day:** 85 nmol/L (34 ng/mL) levels on average after 2.5 months [40], with a 100 nmol/L (40 ng/mL) maximum after 5 months. [41]
    - **1,500 IU a day:** Based on the other numbers here, estimated to be 90 nmol/L (36 ng/mL) on average after 5 months.
    - **2,000 IU a day:** Based on the other numbers here, estimated to be 100 nmol/L (40 ng/mL) on average after 5 months. However, some studies, at least from the Middle East, showed that 2,000 IU a was not enough to get many subjects above 75 nol/L (30 ng/mL).
    - **4,000 IU a day:** A 120 nmol/L (48 ng/mL) maximum in 5 months. [42], and an average of 168 nmol/L (67 ng/mL) after a year of daily supplementation, the full spectrum at that point ranging from 88 nmol/L (35 ng/mL) to 238 nmol/L (95 ng/mL). [43]
    - **5,500 IU a day:** From 28 to 64 ng/mL in 5 months. [44]

- **10,000 IU a day:** On average 240 nmol/L (96 ng/mL) in 12 months, and 243 nmol/L (97 ng/mL) after 16 months, the highest number being 505 nmol/L (202 ng/mL) and a second dataset showing an average of 505 nmol/L (116 ng/mL). [45]
- **11,000 IU a day:** From 70 nmol/L (28ng/mL) to 220 nmol/L (88ng/mL) in 5 months. [46]

- Chances of hypercalcemia (based on blood values, not on symptoms it appears) from various studies:
  - **400 IU a day:** 0% chance (serum calcium: >2.55 mmol/L). Calcium excretion in urine above 7.5mmol/day - considered "hypercalcemic" - still in 17% of subjects. [47]
  - **3,800 IU a day:** Lowest dose that caused hypercalcemia in a few subjects after a three month period. [48]
  - **4,000 IU a day:** 3% chance of hypercalcemia (serum calcium: >2.55 mmol/L), among 62-65 year olds over a period of 3 years. Calcium excretion in urine above 7.5mmol/day - considered "hypercalcemic" - in 22% of subjects. [49]
  - **10,000 IU a day:** 9% chance of hypercalcemia (serum calcium: >2.55 mmol/L), among 62-65 year olds over a period of 3 years. Calcium excretion in urine above 7.5mmol/day - considered "hypercalcemic" - in 31% of subjects. [50]
- (Proclaimed) health benefits of vitamin D are elusive:
  - A lot of studies show that low vitamin D levels give you a higher risk of catching a cold compared to normal levels, although once you get it, ordinary vitamin D levels don't decrease the duration. Vitamin C supplementation reduces the duration with 8% in adults and 14 in children (unclear if natural vitamin C). Zinc supplementation lowers the disease duration by half in some studies, and zero in others.
    - April 29, 2018, Hindawi: Evidence-Based Complementary and Alternative Medicine, 'Self-Care for Common Colds: The Pivotal Role of Vitamin D, Vitamin C, Zinc, and Echinacea' **(PDF)**: This study review demonstrates that a lot of studies show that vitamin D is effective in preventing the common cold. However, it also mentions the Jama-published study below that came to a total opposite conclusion: vitamin D makes barely, if any, difference. In any case it seems even low doses of 400-800 iu a day have a positive effect, with it generally not being necessary to go beyond 4,000 IU a day for prevention.
    - June 15, 2016, Nutrients, 'Vitamin D Status and Quality of Life in Healthy Male High-Tech Employees': *"Three hundred and fifty-eight men were enrolled in the study; mean serum 25(OH)D level was 22.1 ± 7.9 ng/mL (range 4.6–54.5 ng/mL). ... Every 1 ng/mL increase of 25(OH)D*

was associated with 9% reduction in the odds of reporting self-rated health as fair or poor. Poisson regression model demonstrated an association between physically unhealthy days and 25(OH)D levels (rate ratio 0.95, p < 0.001). In conclusion, serum levels of 25(OH)D were associated with self-rated health and with physically unhealthy days of HRQOL [Health-related quality of life questionnaire] in healthy high-tech male workers."

- Oct., 2012, JAMA Network, 'Effect of Vitamin D3 Supplementation on Upper Respiratory Tract Infections in Healthy Adults': *"Randomized, double-blind, placebo-controlled trial conducted among 322 healthy adults... Participants were randomly assigned to receive an initial dose of 200 000 IU oral vitamin D3, then 200 000 IU 1 month later, then 100 000 IU monthly (n = 161), or placebo administered in an identical dosing regimen (n = 161), for a total of 18 months. ...*

  Results: The mean baseline 25-OHD level of participants was 29 (SD, 9) ng/mL. Vitamin D supplementation resulted in an increase in serum 25-OHD levels that was maintained at greater than 48 ng/mL throughout the study. There were 593 URTI episodes in the vitamin D group and 611 in the placebo group, with no statistically significant differences in the number of URTIs per participant (mean, 3.7 per person in the vitamin D group and 3.8 per person in the placebo group; risk ratio, 0.97; 95% CI, 0.85-1.11), number of days of missed work as a result of URTIs (mean, 0.76 days in each group; risk ratio, 1.03; 95% CI, 0.81-1.30), duration of symptoms per episode (mean, 12 days in each group; risk ratio, 0.96; 95% CI, 0.73-1.25), or severity of URTI episodes. These findings remained unchanged when the analysis was repeated by season and by baseline 25-OHD levels.

  Conclusion: In this trial, monthly administration of 100 000 IU of vitamin D did not reduce the incidence or severity of URTIs in healthy adults."

- Bone density increases in old individuals with vitamin D and calcium supplementation and leads to half or less than half of the fractures - but only when it is a low dose of around 700-1000 IU a day max it appears. Mega-doses of 4,000 or 10,000 only decrease bone mineral density it turns out. Supplementation for children and healthy adults doesn't seem to make any difference.
  - Sep. 4, 1997, New England Journal of Medicine, 'Effect of Calcium and Vitamin D Supplementation on Bone Density in Men and Women 65 Years of Age or Older': *"We studied*

the effects of three years of dietary supplementation with calcium and vitamin D on bone mineral density, biochemical measures of bone metabolism, and the incidence of nonvertebral fractures in 176 men and 213 women 65 years of age or older who were living at home. They received either 500 mg of calcium plus 700 IU of vitamin D3 (cholecalciferol) per day or placebo. ... Of 37 subjects who had nonvertebral fractures, 26 were in the placebo group and 11 were in the calcium–vitamin D group (P = 0.02). ...

In men and women 65 years of age or older who are living in the community, dietary supplementation with calcium and vitamin D moderately reduced bone loss measured in the femoral neck, spine, and total body over the three-year study period and reduced the incidence of nonvertebral fractures."

- Jan. 25, 2011, British Medical Journal (BMJ), 'Effects of vitamin D supplementation on bone density in healthy children: systematic review and meta-analysis': *"From 1653 potential references, six studies, totalling 343 participants receiving placebo and 541 receiving vitamin D, contributed data to meta-analyses. Vitamin D supplementation had no statistically significant effects on total body bone mineral content or on bone mineral density of the hip or forearm. There was a trend to a small effect on lumbar spine bone mineral density (standardised mean difference 0.15 ...*

  In studies with low serum vitamin D, significant effects on total body bone mineral content and lumbar spine bone mineral density were roughly equivalent to a 2.6% and 1.7% percentage point greater change from baseline in the supplemented group. ...

  Conclusions It is unlikely that vitamin D supplements are beneficial in children and adolescents with normal vitamin D levels."
- Aug. 27, 2019, JAMA Network, 'Effect of High-Dose Vitamin D Supplementation on Volumetric Bone Density and Bone Strength': *"Interventions: Daily doses of vitamin D3 for 3 years at 400 IU (n = 109), 4000 IU (n = 100), or 10 000 IU (n = 102). Calcium supplementation was provided to participants with dietary intake of less than 1200 mg per day. ... Conclusions and relevance: Among healthy adults, treatment with vitamin D for 3 years at a dose of 4000 IU per day or 10 000 IU per day, compared with 400 IU per day, resulted in statistically significant lower radial BMD*

[Bone Mineral Density]; tibial BMD was significantly lower only with the 10 000 IU per day dose. There were no significant differences in bone strength at either the radius or tibia. These findings do not support a benefit of high-dose vitamin D supplementation for bone health; further research would be needed to determine whether it is harmful. ...

Results: Of 311 participants ... 287 (92%) completed the study. Baseline, 3-month, and 3-year levels of 25(OH)D were 76.3, 76.7, and 77.4 nmol/L for the 400-IU group; 81.3, 115.3, and 132.2 for the 4000-IU group; and 78.4, 188.0, and 144.4 for the 10 000-IU group. There were significant group × time interactions for volumetric BMD. At trial end, radial volumetric BMD was lower for the 4000 IU group (-3.9 mg HA/cm3 [95% CI, -6.5 to -1.3]) and 10 000 IU group (-7.5 mg HA/cm3 [95% CI, -10.1 to -5.0]) compared with the 400 IU group with mean percent change in volumetric BMD of -1.2% (400 IU group), -2.4% (4000 IU group), and -3.5% (10 000 IU group). Tibial volumetric BMD differences from the 400 IU group were -1.8 mg HA/cm3 (95% CI, -3.7 to 0.1) in the 4000 IU group and -4.1 mg HA/cm3 in the 10 000 IU group (95% CI, -6.0 to -2.2), with mean percent change values of -0.4% (400 IU), -1.0% (4000 IU), and -1.7% (10 000 IU). There were no significant differences for changes in failure load (radius, P = .06; tibia, P = .12). "

- Might prevent musculoskeletal pain in individuals involved in streneous tasks:
  - June 2008, Journal of Occupational and Environmental Medicine, 'Vitamin D Deficiency in Iraq and Afghanistan Veterans With Chronic Musculoskeletal Pain': *"Seasonal variation in vitamin D deficiency associated with environmental sun exposure has been demonstrated in 165 normal individuals revealing deficiency in adults 18 to 49 years of age from 4% in the summer, to 32% in the winter.2 A study of 150 patients with musculoskeletal pain determined that 93% had vitamin D deficiency..."*
- Deficient vitamin D levels can lead to a 10-25% lower testosterone level, but not all studies record this. See further below.
- Can relieve the symptoms of rheumanoid arthritis.
- *"Three patients [who happened to have] psoriasis showed marked clinical improvement in their skin using 20,000 to 50,000 IUs/day."*
- Asthma, skin lesions, psoriasis.
- April 7, 2023, 'Vitamin D supplements linked to lower risk of advanced cancer': *"Among more than 25,000 men and women,*

those who were randomly assigned to take 2,000 international units (IU) of vitamin D each day for an average of 5.3 years were nearly 20% less likely than those who received a placebo to have an advanced cancer — defined here as one that metastasized (spread from the original tumor site) or proved fatal."

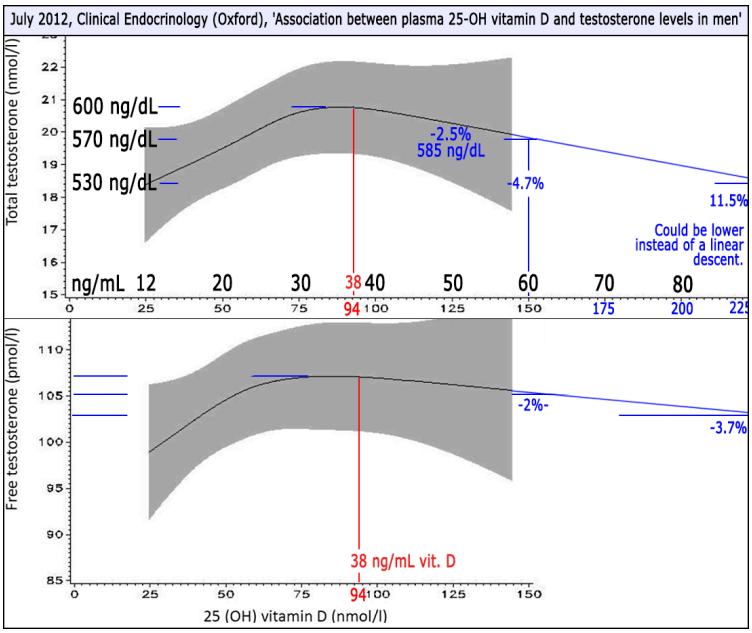
- Many other studies did not find any evidence for vitamin D lowering the chance of cancer. [51]
- In fact, lowered vitamin D does not seem to have much effect on the prevention of major diseases as cancer, cardiovascular, or diabetes:
  - Nov. 23, 2021, Nature Reviews Endocrinology. 'The health effects of vitamin D supplementation: evidence from human studies': *"The VITAL, ViDA and D2d randomized clinical trials (combined number of participants >30,000) indicated that vitamin D supplementation of vitamin D-replete adults (baseline serum 25OHD >50 nmol/l) does not prevent cancer, cardiovascular events, falls or progression to type 2 diabetes mellitus. Post hoc analysis has suggested some extra-skeletal benefits for individuals with vitamin D deficiency. Over 60 Mendelian randomization studies, designed to minimize bias from confounding, have evaluated the consequences of lifelong genetically lowered serum 25OHD concentrations on various outcomes and most studies have found null effects. Four Mendelian randomization studies found an increased risk of multiple sclerosis in individuals with genetically lowered serum 25OHD concentrations. In conclusion, supplementation of vitamin D-replete individuals does not provide demonstrable health benefits. This conclusion does not contradict older guidelines that severe vitamin D deficiency should be prevented or corrected."*

- Comments of random people:
  - **YouTube comment:** *"I keep my serum levels in the low to mid 90's ng/ml taking 10k iu daily for going on 10 yrs now, my wife takes 4k iu daily to keep her levels in the 90's. We also take magnesium, k2 and a few other supplements. What level does 2k iu D3 give you?"*
  - **YouTube comment:** *"I was deficient under 30 [ng/ml] [75nmol/l] and always getting sick. I took 3000IU a day and over 18mths it's slowly increased to just over 100 [250nmol/l]. I started noticing a difference around 50 but once I got to 90-100, that's when I really noticed all the health benefits. Pretty much never get sick now when compared to before."*

- **YouTube comment:** *"I've been taking 10,000 IU of vitamin D3 daily for 2 1/2 years and the last time I had it checked it was 84 ng/mL. I also daily take 200 IU of K2 MK7. I'm a 72 year old male, about 220 lbs. I was able to find a naturally oriented doctor and she wants vitamin D between 80 to 100 ng/mL and would regard 50 as way too low."*
- **YouTube comment:** *"I am a breast cancer survivor and have been taking 10,000 IU for 15 years now without any toxicity."*
- **YouTube comment:** *"My wife cured her Rheumatoid arthritis in six months taking 200,000iu's of D3, vitamin K2 magnesium and moringa. Started in June of 2019 and by Dec her blood levels for rheumatoid arthritis were 4. Her levels were 186. Now she's on a maintenance dose of 50,000iu a day."*
- **YouTube comment:** *"I am 63 landscaper, hard work in hot Florida. A year ago thought I would have to find something else to do because I felt worn out tired with pain. Started taking 30 to 40k vit D3 daily for maybe a month. Since then I take 20,000 IU of vit D3 with 200 vit k mk7."*
- **YouTube comment:** *"I was taking about 20-30 thousand iu's per day ....but here is the kicker: I only took that amount for about 3 weeks before the toxicity symptoms began to appear. Was frightening"*
- **YouTube comment:** *"I had my Vitamin D level checked 1 month ago and I was at 22ng/ml(low) [55nmol/l]. After finding out my low level I started taking 10,000 IU of D3 EVERYDAY and getting some natural sunshine. I just got my blood tested on Feb 1st and now I am up to 39ng/ml! [98nmol/l] I feel way better. No side effects from taking 10,000 IU/daily. Once I hit 60ng/ml [150nmol/l] I will lower it to 6,000 IU to see if I can sustain the 60ng/ml. I weigh 210lb."*
- **YouTube comment:** *"I take 8k [UI of vitamin D2] with a medium chain fatty acid (coconut oil 1 teaspoon morning and night). I get my potassium via food and herbs. Vitamin B complexes via Nutritional Yeast and a Modified Keto diet. Been in remission for my MS now for 10 years."*
- **YouTube comment:** *"I took 20,000 IU's for many months with k2. I then had D levels checked by doctor, wasn't high, normal."*
- **YouTube comment:** *"Living in Seattle, I was taking 3,000 IU of D3 every day throughout the winter and my blood tests confirmed I was still very low on vitamin D."*

- Vitamin D has a controversial history [52]:
  - Everything was vitamin D fortified in the early 20th century after it was found out it, similar to sunlight, cured rickets, a childhood disease in which bones are warped due to being too soft.

- In the early 1950s these fortifications were reversed in many countries due to worries of hypercalcemic toxicity. The basis for these actions though appears to have only been a small sample study of children who happened to be overly sensitive to vitamin D, even at levels of 1,500 IU a day. Other worries were raised when extreme doses of 200,000-300,000 ui a day were given to arthritis sufferers. This quickly caused toxicity symptoms that took months or years to resolve, because vitamin D is stored in, and released from, the fat.
- As a result, 75 nmol/L (30 ng/mL) serum vitamin D levels were seen as the maximum safe limit. However, in later studies still no toxicity was observed at at 125 nmol/L (50ng/ml) in test subjects. 11 weeks of 1,000 IU a day supplementation resulted in 33.6ng/ml levels on average. New info says 150ng/mL basically lower limit to see any toxic effects. Another studyshowed that only one person with levels of 364ng/ml showed hypercalcemia. No evidence in general for increase in chances of kidney stones or calcification, certainly not below 4,000 IU a day. In fact, higher levels reduce chances of hypertension, stroke, and myocardial infarction. Toxicity for vitamin D is extremely rare and usually associated with over "50,000-100,000 IU/d for months"



- Due to internet doctor advice (such as Dr. Eric Berg), a lot of people today like to increase their vitamin D levels to between 200-250 nmol/L (80-100 ng/mL). The idea is that it makes people much resistant to diseases.
- However, we already saw that mega-doses of 4,000 or 10,000 IU only decrease bone mineral density compared to just 400 IU (noting

in between was offered), as it turns out. The 400 IU, short and long term, would put someone around 78 nmol/L (31 ng/mL).

- Similarly, it is interesting to see that apparently both total and free testosterone levels start to go down again above roughly 95 nmol/L (40 ng/mL), a very respectable level and pretty much the maximum that is naturally possible for most people. Total testosterone drops harder than free, but, at least according to the above chart, it appears that at 225nmol/l (90 ng/mL) you have at least 11.5% less testosterone than optimal, and a similar level as an severely deficient 35 nmol/L (14 ng/mL). You likely are much healthier at that 225nmol/l (90 ng/mL), but apparently not purely testosterone wise. Hence, there's an argument to be made to stick at vitamin D levels of 38-50 if you have no particular health issues that may require higher vitamin D levels. This is theory, of course. Maybe bloodwork shows that there is no issue with you testosterone-wise going up to 200+ nmol/L (80+ ng/mL).
- In any case, a deficiency in vitamin D can lead to 14 to 25% lower testosterone levels from optimum, with zinc deficiency sometimes accounting for 50-75% lower levels. Once there is a sufficiency, additional supplementation dopes not lead to higher testosterone levels, and may actually slowly bring them down again.
  - July 2012, Clinical Endocrinology (Oxford), 'Association between plasma 25-OH vitamin D and testosterone levels in men': *"This is the fourth study to show positive associations between vitamin D and testosterone1-3. ...*

    The spline models show graphically that the positive association between [vitamin] D and total and free testosterone is linear at lower [vitamin] D levels, below approximately 75-85 nmol/l in the case of total testosterone and 75 nmol/l in the case of free testosterone (figure 2a and and 2b),2b), reaching a plateau at higher levels... [Between 25 and 80 nmol/L (10 and 32 ng/mL) the total testosterone rises by about 14%; it ever so slowly decreases from about 88 nmol/L [34 ng/mL] on, to about 5% lower at 150 nmol/L [60 ng/mL] [free T has declined 1-2% at 150 nmol/L]. However, in the chart with seasonal changes, when vitamin D goes up from 54 to 75 nmol/L [21 to 30 ng/mL] it causes zero fluctuation in testosterone. It even is 2-3% lower in summer than in winter.] The shape of the dose-response curves indicate that associations between 25(OH)D and testosterone are strongest in lower ranges of 25(OH)D. Unlike for vitamin D, we did not observe any seasonal variation of testosterone concentrations."
  - March 2011, Hormone and Metabolic Research journal, 'Effect of vitamin D supplementation on testosterone levels in men': *"Healthy overweight men undergoing a weight reduction program who participated in a randomized controlled trial*

were analyzed for testosterone levels. The entire study included 200 nondiabetic subjects, of whom 165 participants (54 men) completed the trial. Participants received either 83 µg (3,332 IU) vitamin D daily for 1 year (n = 31) or placebo (n =2 3). Initial 25(OH)D concentrations were in the deficiency range (< 50 nmol/l) [< 20 ng/mL] and testosterone values were at the lower end of the reference range (9.09-55.28 nmol/l for males aged 20-49 years) in both groups. Mean circulating 25(OH)D concentrations increased significantly by 53.5 nmol/l in the vitamin D group [so 103.5 nmol/l], but remained almost constant in the placebo group. Compared to baseline values, a significant increase in total testosterone levels (from 10.7 ± 3.9 nmol/l to 13.4 ± 4.7 nmol/l; p < 0.001) ***[i.e. 25% increase]****, bioactive testosterone (from 5.21 ± 1.87 nmol/l to 6.25 ± 2.01 nmol/l; p = 0.001)* ***[i.e. 20% increase]****, and free testosterone levels (from 0.222 ± 0.080 nmol/l to 0.267 ± 0.087 nmol/l; p = 0.001)* ***[i.e. 20% increase]*** *were observed in the vitamin D supplemented group. By contrast, there was no significant change in any testosterone measure in the placebo group."*

- **July 20, 2023 YouTube upload by 'Connor Curtis', 'How I Increased My Testosterone 97% in 30 days with 3 everyday supplements':** A relatively thin, not very tanned, 24-year-old Australian guy living near a beach right after summer, Connor Curtis, in 30 days went from a total testosterone level of 260 ng/dL to 511 ng/dL (+97%) by taking away his deficiencies with vitamin D, magnesium and zinc. His free testosterone went from 229 ng/dL (255 is low) to 392 ng/dL (+71%). SHBG went from 17 nmol/L to 28 nmol/L (+66%)

  His estradiol (E2) though increased from 128 pmol/L to 149 pmol/L (50-150 is optimal, above 150 is high) - a 17% increase. This probably also explains why he responded so well to Tongkat Ali (which boosted his testosterone from 479 to 811) in later months, because that strongly decreases E2 and converts it to testosterone. His only vitamin and mineral supplementation:

  - **Vitamin D3:** 10,000 IU a day upped him from 42 to 212 nmol/L (16.8ng/mL to 85ng/mL), which is from "deficient" to "high optimal", something that almost isn't possible to achieve naturally. He actually started taking 5,000 a day after, which dropped him to 180 nmol/L (72 ng/mL). He also supplemented with vitamin K2 at the same time though.
  - **Zinc:** This sat at the absolute minimum acceptable value of of 10 ug/dL. 1 month of 1 pill of 20 mcg zinc brought it to

12 ug/dL. A second month of 2 pills for a total of 40 mcg brought him to 15 ug/dL. Only above 18 is potentially toxic.

- **Magnesium:** After supplementation with 250mg of magnesium glycinate a day 3.9 mg/dL, his magnesium levels increased from 3.9 mg/dL (below 4.2 mg/dL is deficient) to 5.8mg/dL (6-6.8 mg/dL is optimal).

- If you want to be a little higher with vitamin D, maybe aim for 125 nmol/L (50 ng/mL), which puts you in the high range of professional soccer plays in summer. It may possibly decrease your free testosterone by 1% and total testosterone by 2.5%, and slightly bring your bone density to baseline, but you *might* also just get that little bit of extra flu protection, and may just feel a bit better.
  - Nov. 7, 2011, Journal of the International Society of Sports Nutrition, 'Seasonal pattern of vitamin D in male elite soccer players': *"The concentration of 25(OH) D3 was 111.5± 30.5, 92.3 ± 30.8 and 102.5±37.1 nmol/L (Average ± DS) in autumn, winter and spring respectively. The concentration of 25(OH) D3was 111.5± 30.5, 92.3 ± 30.8 and 102.5±37.1 nmol/L (Average ± DS) in autumn, winter and spring respectively. ... Parallel to the vitamin D reduction, there was another significance reduction (p<0.05) of BMC [Bone mineral content] from 3453.5 ± 339.4 to 3409.1 ± 278.0 g (Average ± DS) between autumn and winter."*
- Insulin resistance (QUICKI and OGIS index) is a weird one as well it appears. In one study with "healthy men" with a baseline vitamin D level of 53.3 nmol/L / 21 ng/mL, supplementing for 12 weeks with 2,850 IU a day of vitamin D, did nothing significant for testosterone and actually made their insulin sensitivity worse. This is odd in all ways, because this supplement regimen should only have increased their vitamin D levels to roughly a peak optimal 100 nmol/L / 40 ng/mL. In contrast, a group of pre-diabetes subject receiving 8,500 IU a day for 12 weeks, improved their insulin sensitivity by 4%:
  - Nov. 1, 2017, The Journal of Clinical Endocrinology & Metabolism, 'Vitamin D and Testosterone in Healthy Men: A Randomized Controlled Trial': *"Ninety-eight healthy men with TT [Total Testosterone] levels ≥10.4 nmol/L [≥300 ng/dL] and [vitamin D] levels <75 nmol/L [<30 nmol/L] completed the study. ... Subjects were randomly assigned to receive 20,000 IU/wk [2,850 IU a day] of vitamin D3 (n = 50) or placebo (n = 50) for 12 weeks. ... Vitamin D treatment had no effect on TT levels in middle-aged healthy men with normal baseline TT, but it significantly decreased ... quantitative insulin sensitivity check index (QUICKI) ...*
    Results: In healthy men [... 39 years (±13 years); 25(OH)D level, 53.3 nmol/L (±18.3 nmol/L) [21 ng/mL] ; TT, 19.1 nmol/L (±5.6 nmol/l)] [551 ng/dL], no significant treatment effect on TT was found; however, there were significant effects on quantitative

insulin sensitivity check index (QUICKI) and a trend toward decreased Matsuda index."

- Dec. 10, 2020, Cureus: Journal of Medical Science, 'Effect of Vitamin D3 Supplementation on Insulin Sensitivity in Prediabetes With Hypovitaminosis D': *"The objective of this study was to assess the effect of vitamin D3 supplementation on oral glucose insulin sensitivity (OGIS) index in patients with prediabetes and hypovitaminosis D. Methods We enrolled 120 individuals with prediabetes (ADA definition) and hypovitaminosis D (vitamin D < 30 ng/mL) and randomized them into the vitamin D supplementation (60,000 IU weekly [8,500 p.d.]) group and the placebo group. ...*
Results [after 12 weeks]: ... Serum vitamin D levels (10.11 ... to 52.2 ... ng/mL...) and OGIS index (376.4 ... to 391.7 ...) increased significantly on per-protocol analysis in the vitamin D group. There was no significant change observed in vitamin D levels and OGIS index in the placebo group. ... Conclusions: The correction of hypovitaminosis D in subjects with prediabetes led to improved insulin sensitivity as assessed by OGIS index at 120 minutes, signifying the role of vitamin D in glucose homeostasis."

Vitamin E

- RDA is 12-15 mg / 18-22 IU per day. A lot of supplements contain 400 IU / 268 mg per tablet or 500 IU / 335 mg per tablet. 400 IU a day is generally considered the upper limit. Moringa leaf powder usually tests around 100mg per 100g.
- Natural vitamin D has a half-life in the body of anywhere from 24 to 72 hours, with various compounds only having 4-15 hour half-lives. In contrast, vitamin D3, also stored in the body's fat, has a half-life of 3 weeks. One study found a 55 hour half-life in smokers for vitamin E, versus a 72 hour half-life for non-smokers. [53]
- Despite actual symptoms of (severe) deficiency being relatively rare, vitamin E is very hard to get enough of without supplements for most people. On a personal note, when this author investigated his own healthy diet (milk, crackers with butter and cheese, fruit, rice, meat, fresh vegetables) for vitamin and mineral content, it turned out that vitamin E sat at the lowest intake of all at the end of the day: just 27% of RDA.
- Tocopherol vitamin E:
  - Similar to vitamin C, there are both natural (D-α-tocopherol) and synthetic (DL-α-tocopherol acetate or simply DL-α-tocopherol) vitamin E supplements. Petrochemicals are

involved in synthetic vitamin E, which is less biologically available to the body. Synthetic vitamin E is estimated to only have anywhere 12% to 50% of the bioavailability of natural vitamin E, with there always being chances of additional side effects we haven't picked up on. The price difference between the two is negligible.

- Tocotrienol vitamin E:
  - March 27, 2006, Life Sciences journal, 'Tocotrienols: Vitamin E Beyond Tocopherols': *"In nature, eight substances have been found to have vitamin E activity: α-, β-, γ- and δ-tocopherol; and α-, β-, γ- and δ-tocotrienol. Yet, of all papers on vitamin E listed in PubMed less than 1% relate to tocotrienols. The abundance of α-tocopherol in the human body and the comparable efficiency of all vitamin E molecules as antioxidants, led biologists to neglect the non-tocopherol vitamin E molecules as topics for basic and clinical research. Recent developments warrant a serious reconsideration of this conventional wisdom. Tocotrienols possess powerful neuroprotective, anti-cancer and cholesterol lowering properties that are often not exhibited by tocopherols."*
- An anti-oxidant, adequate Vitamin E has been tied to reduced chances of heart disease, cancer, Alzheimer, eye issues, and more. It also has neuroprotective features.
- Joe Tippens supplemented his very successful fenbendazole anti-cancer treatment with vitamin E, because it possibly is the vitamin that supercharges fenbendazole in eradicating cancer.

Vitamin K (K1)

- Fat soluble vitamin predominantly found in leafy vegetables. Not to be confused with vitamin K2.

Vitamin K2

- Fat-soluble vitamin of which there are two variations: MK4 and MK7, each with their own benefits.
- MK4:
  - Half-life of 2 hours. Produced by the human body and situated in many tissues. All vitamin K1 and vitamin K2 is ultimately converted to MK4.
  - Various studies show 45mg a day of MK4 increasing bone density of subjects by anything from 0.14 to 9% over the course of a year, with 58 to 62% fewer fractures occuring among test subjects daily ingesting 45mg a day of MK4.

- **MK7:**
  - Half-life of 3 to 3.5 days. Only produced by bacteria in fermented foods.
  - Some studies say that MK7 has no effect on bone mass, even when taking it daily for 3 years. Other claim it does. [54]
  - Dec. 2019, Integrative Medicine journal, 'Highlighting The Substantial Body Of Evidence Confirming The Importance Of Vitamin K2 As A Cardio-Support Nutrient, And How The Right K2 Makes All The Difference': *"The Rotterdam Study (2004) and the Prospect-EPIC Study (2008) were the first population-based evidence that a high dietary intake of Vitamin K2–but not vitamin K1–offered a strong positive reduction in cardiovascular risk. ...*

    Findings from this 10-year population-based study indicated that eating foods rich in natural Vitamin K2 (at least 32 mcg/day) resulted in 50 percent reduction of arterial calcification, 50 percent reduction of cardiovascular risk, and 25 percent reduction of all-cause mortality.10 In 2009, these findings were confirmed by another population-based study with 16 000 subjects (ranging in age from 49 to 70) from the Prospect-EPIC cohort population. After following female participants for up to eight years, the researchers found that for every 10 mcg Vitamin K2 (MK-7, MK-8, and MK-9) consumed—again, not Vitamin K1—the risk of coronary heart disease was reduced by 9 percent. Vitamin K1 intake had no effect.11 ...

    Using ultrasound and pulse-wave velocity measurements (recognized as standard measurements for cardiovascular health), researchers determined that carotid artery distensibility was significantly improved for a 3-year period in the MenaQ7® group as compared with that of a placebo group, especially in women having high arterial stiffness. Also, pulse-wave velocity showed a statistically significantly decrease after 3 years for the Vitamin K2 (MK-7) group, but not for the placebo group, demonstrating an increase in the elasticity and reduction in age-related arterial stiffening, again, especially in women having high arterial stiffening. ...

    A nutritional dose of Vitamin K2, in fact, promotes cardiovascular health. No other compound to date has been shown to deliver the same cardiovascular protection as Vitamin K2 as MK-7.12

    Two studies in 2019 further strengthened (and reconfirmed) the relationship between Vitamin K2 and cardiovascular disease. ...

    What the consistent, grim statistics usually hide is that poor cardiovascular health is not an issue reserved for the middle-aged or elderly. A 2019 study of 22 346 young adults, ages 30 to

49, undergoing coronary artery calcium (CAC) testing for clinical indications, found that 34.4% had CAC, and those with elevated CAC scores had significantly higher rates of coronary heart disease and coronary vascular disease mortality.15 ...
Further, Omega-3 has been recognized for cardiovascular support, with qualified health claims for the reduction in risk of Coronary Heart Disease in the US. While Omega-3's mechanism of action is linked to supporting healthy inflammation, triglycerides, blood pressure, and the promotion of arterial health, it is not recognized for impacting vascular calcification. This is what makes Vitamin K2 a perfect complementary nutrient–providing the final piece of the heart-health puzzle."

VITAMINS: WATER-BASED

Vitamin B

- Water soluble, B complex vitamins are strongly linked to the functioning of the nervous system.
- Most of them are easily secreted and can be taken in doses.

- **B6:** Particularly strongly linked to the lowering of estrogen.

- **B12:** Important for better focus, good nerve health, oxygenation of your brain, etc. Recommended Dietary Allowance: 2.4 mcg. Optimum Daily Intake (ODI): 10k mcg. A lot of stress, alcohol, or smoke requires much higher B12 levels. The amount needed for nerve repair: 1500-3000 mcg. B12 is extremely safe to supplement, because it is water soluble and easily discarded. Studies show that even astronomical amounts cause no issues. A study showed that 60,000 mcg a day could effectively be used to battle MS. B12 content in common food:
  - 1 liter milk: 4.6 mcg.
  - Salmon (100g): 4 mcg.
  - Beef (100g): 2 mcg.
  - Cheese (100g): 2 mcg.
  - 500g yoghurt: 2.4 mcg.
  - Egg: 0.8 mcg.
  - Pork: 0.4 mcg.
- Experiences with B12 supplementation:
  - **YouTube comment:** *"When I was 65 my primary car physician during an annual health visit did a quick sensation check on the bottom of my feet. I could not feel it. My B12 blood test was normal although on the low end of normal. She recommended take a B12 supplement with 2000 mg. I did and within 6 days*

my feet had returned to pretty normal sensation. They continued to improve for more than six months."

- YouTube comment: *"At the age of 35, one day at a very stressful job, I suddenly lost the feeling in the tips of my toes, fingers and the ability to taste also having lost the feeling in my tongue. I also developed a splitting headache, lost a lot of weight and noticed my hair falling out. My doctor instinctively tested for my B12 levels. My levels were so low, that they did not register on the test. She put me on weekly injections and was concerned if I might have developed permanent nerve damage. She said also that because I had premature grey hair, that it was very luckily that I did not absorb B12 well. Luckily, after 6 scary months, I gradually regained all the feeling back with no damage. More than 10 years have passed, and I make sure I take B12 almost daily now."*
- YouTube comment: *"If you've ever had Trigeminal Neuralgia, an excruciating facial nerve condition that's nicknamed "The Suicide Disease," you wouldn't think anything is too much when it comes to B12. Because of sublingual Methylcobalamin taken at 5,000 mcg dosage, my TN completely disappeared! It was nothing short of miraculous—keeping me from having to have a scheduled MVD surgery (brain surgery) at UCI in Irvine, Ca. Three years later, I am still symptom free! I still take sublingual 5,000 mcg every two days just to make sure the TN doesn't come back. Back in the 50's sublingual B12 was widely used for TN and MS as a first line of treatment. But then Big Pharma arose and... well you know the rest of that story. It's an all-too familiar one."*
- YouTube comment: *"Thank you I was taking about 10,000mcg per tab I two little tablets because I needed the energy without taking caffeine. I was worried I would might be taking too much. Thank you again."*

Vitamin C

- Likely the best known vitamin supplement on the planet. Unlike most mammals, humans do not produce vitamin C themselves. Whenever it is not taken adequately, usually the first symptom is gums that bleed very easily. This will progress into other signs of scurvy: weakness, fatigue, poor wound healing, and sore arms and legs.
- The body usually stores about 1.4 to 2 grams of vitamin C in the adrenal glands, pituitary gland, and liver. If it drops below 300mg you are at near scurvy (due to vitamin C being necessary to make

collagen). Anything above the 2 grams gets excreted quickly, but can certainly be of temporary benefit to the body, such as fighting off infections or protecting from sun damage ("liver spots" are a sign of vitamin C deficiency).

- Vitamin C not absorbed in the presence of sugar and insulin.
- Similar to vitamin E, two types of vitamin C supplements are sold: cheap synthetic and more expensive natural:

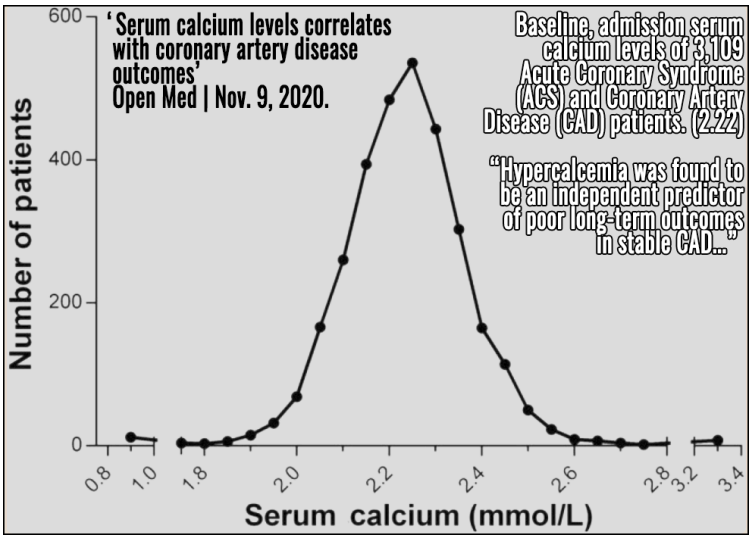
  - **Natural:** In nature the "vitamin C complex" consists of ascorbic acid, copper enzyme, vitamin J (the anti-pneumonia vitamin – used with a lot of asthma cases), and vitamin K. Natural vitamin C pills contain Acerola or Rose Hip / Rozenbottel extract, two fruits with some of the highest vitamin C content on the planet. An alternative is Papaya leaf extract.

  - **Synthetic:** Cheap ascorbic acid-derived vitamin C really is not vitamin C. It is chemically created from corn syrup, with the aid of hydrochloric acid and aceton an acid. Only in recent dictionaries has ascorbic acid been labeled as such. The process:
    - **Step 1-9 (Starch Hydrolysis):** Corn starch is broken down into simple sugar (D-Glucose) by the action of heat and enzymes.
    - **Step 10 (Hydrogenation):** D-Glucose is converted into D-Sorbitol.
    - **Step 11 (Fermentation):** D-Sorbitol is converted into L-Sorbose.
    - **Step 12 (Acetonation):** Acetone is added. L-Sorbose is also combined with an acid at low temperatures.
    - **Step 13 (Oxidation):** The product is oxidized with a catalyst, acidified, washed and dried forming L-Gluconic Acid.
    - **Step 14 (Hydrolysis):** L-Gluconic Acid is treated with hydrochloric acid forming crude ascorbic acid.
    - **Step 15 (Recrystallization):** The crude ascorbic acid is filtered, purified and milled into a fine crystalline powder.
  - Dr. Eric Berg, on his YouTube channel, explained he once had a patient who was injected in Mexico with megadoses of synthetic vitamin C. He ended up with the worst vitamin C definiency ever, resulting in fatigue, joints falling apart, heavy varicose veins (also on the nose) and hemmroids. Vitamin C's flavonoids are preventing varicose veins. Adrenal issues are common with high synthetic Vitamin C.
- A recently discovered fruit in Australia is the Kakadu Plum (Gubinge). At least when fresh, at about 3,000% RDA, it has the highest vitamin C content in the world:

- March 2023, Molecules journal, 'Bioactive Properties of Kakadu Plum-Blended Products': *"The Kakadu plum contains a high concentration of ascorbic acid (vitamin C) and was identified as a bush plant nutrient by Aboriginal people [11]. In the first report, Kakadu plum fruit contained 2300–3150 mg of ascorbic acid per 100 g of fresh weight (2.3–3.1%). However, on a dry weight basis in another study, the ascorbic acid levels were recorded as 14,038 ± 701 mg per 100 g (~14%) [12]."*

MINERALS

Calcium



- The normal range for serum levels of calcium in the blood is a very tightly-maintained one by the body that ranges from 2.25 to 2.62 mmol/L (9 to 10.5 mg/dL). Often laboraties provide "normal" ranges of 2.15 to 2.50 mmol/L (8.6 to 10 mg/dL). These appear to be questionable, as Coronary Artery Disease (CAD) patients, both acute and stable, almost all appear to have levels below 2.45 mmol/L (9.8 mg/dL), peaking at 2.18-2.22. [55] Few people probably have elevated levels of calcium though, because it requires excessive supplementation.
- It's interesting that a calcium-CAD study, as a side-note, mentioned that *"hypercalcemia was found to be an independent predictor of poor long-term outcomes in stable CAD patients surviving from a recent acute myocardial infarction."* [56] This is interesting, because people supplementing with 5,000 or 10,000 IU doses of vitamin D a day generally worry about increased calcium levels leading to hypercalcemia in the arteries and other soft tissues. While a valid worry, and it does happen from anything to the joints to kidneys, it is interesting to see in the study above that basically none of the heart

disease patients actually had elevated levels of serum calcium. In that sense, greatly elevated vitamin D supplementation - which requires considerable persistence - seems to be very beneficial, as long the line of 250nmol/L (100ng.mL) isn't crossed (too far).

Bismuth

- Used to kill intestinal bacteria as Helicobacter Pylori, which can cause ulcers and potentially even cancer.
- Used as an antacid to combat heartburn and acid reflux, indigestion, diarrhoea and feeling sick.

Boron

- Used to reduce joint pain.
- Up to 10mg per day has shown to increase testosterone.
- Experiences joint pain improvement:
  - **Online comment:** *"I had knee pain during squats. I started using boron 6mg over the past 2 weeks and noticed that I'm experiencing 70% less inflammation. ... It really driggin works."*

Copper

- When you take zinc supplements, they tend to lower copper. Officially, the ideal ratio is an 8:1 zinc-copper ratio, but anything between 4:1 and 12:1 is fine. I personally took a 40:3 / 13.3:1 ratio (purely supplementation, without paying attention to food) for 6 weeks, with a subsequent blood test showing both zinc and copper near their maximum range. So the question is how strongly we need to adhere to these ratios.
- Especially in areas with copper water lines, there is a chance of copper toxicity. This is not very common, but something to keep an eye on.

Iron

- Iron is an important mineral in the human body.
- Normal values:
  - **Serum iron:** Generally 60-170 mcg/dL or 10.7-30.4 umol/L is seen as acceptable ranges. Some source say only below 55 mcg/dL /

9.8 umol/L is iron deficiency. A Dutch lab says that the "reference range" is: 5.9-34 umol/L / 33.5-193 mcg/dL.

- **Transferrin saturation:** 20-50% is considered acceptable. Below 20% indicates iron deficiency.

- Half-life of iron is hard to figure out:
  - ucsfhealth.org/education/hemoglobin-and-functions-of-iron (accessed: May 28, 2024): *"The average adult male has about 1,000 mg of stored iron (enough for about three years), whereas women on average have only about 300 mg (enough for about six months)."*
- Iron deficiency is widespread, also in the West, and especially among women (due to menstruation and childbirth). The worse form, iron deficiency anemia, also is widespread around the world. A lot people in the West appear to have borderline acceptable iron levels though, which might be one of the reasons many labs consider very low levels "acceptable".
  - mediservice.ch/en/wissen /knowledge/eisenmangel.php (accessed: May 29, 2024): *"Five to ten percent of people in Europe suffer from iron deficiency. As women have an increased need for iron (due to menstrual bleeding (periods), for example), they suffer from iron deficiency more frequently. In Europe, 15% to 20% of women of menstrual age are affected. ... Some 10% to 15% of children in Europe are iron-deficient."*
  - July 31, 2023, healthdata.org, 'The Lancet: New study reveals global anemia cases remain persistently high among women and children. Anemia rates decline for men.': *"Globally, in 2021, 31.2% of women had anemia compared with 17.5% of men. The gender difference was more pronounced during the reproductive years, ages 15–49. In this age group, anemia prevalence in women was 33.7% versus 11.3% in men. ... In 2021, Western sub-Saharan Africa (47.4%), South Asia (35.7%), and Central sub-Saharan Africa (35.7%) had the highest anemia prevalence. The regions with the lowest anemia are Australasia (5.7%), Western Europe (6%), and North America (6.8%)."*
  - April 2007, American Family Physician, 'Iron Deficiency Anemia': *"The prevalence of iron deficiency anemia is 2 percent in adult men, 9 to 12 percent in non-Hispanic white women, and nearly 20 percent in black and Mexican-American women. Nine percent of patients older than 65 years with iron deficiency anemia have a gastrointestinal cancer when evaluated."*
  - Dec. 2021, Australian Prescriber, 'Non-anaemic iron deficiency': *"A study of an Aboriginal community in Western Australia identified anaemia among 55% of women and 18% of men. ...*

The World Health Organization (WHO) estimates that 8% of preschool children, 12% of pregnant women and 15% of non-pregnant women of reproductive age in Australia have anaemia..."

- Dec. 2001, American Journal of Clinical Nutrition, 'Prevalence of iron deficiency with and without concurrent anemia in population groups with high prevalences of malaria and other infections: a study in Côte d'Ivoire': *"The prevalence of iron deficiency was 41–63% in the women and children and 13% in the men, whereas the prevalence of IDA [anaemia] was 20–39% in the women and children and 4% in the men."*

- There are two types of natural iron:
  - **Heme iron:** Derived from hemoglobin and has 15–35% bioavailability. It is to be found in liver, meat, poultry and seafood. Dairy and eggs can block iron uptake. In order to boost blood iron naturally, a decent amount of meat is the best source. Per 100 gram: beef (2.47 mg), lamb (1.78 mg), deer (4.98mg).
  - **Non-heme iron:** Has 1-10% bioavailability and comes from vegetable sources as legumes, beans, nuts, seeds, spinach, potatoes. If the diet is high in calcium, polyphenols (tea, coffee), phytates (legumes, whole grains, nuts), or oxalates (spinach, many vegetables, and essentially all nuts/legumes). In effect, almost anything not meat and fruit (the vitamin C enhances absorbtion again), inhibits iron absorbtion, on top of already not being good at devlivering iron to the body. Chili sauce also inhibits iron uptake by about 38%. So does the turmeric supplement, unless a special, modern high tech curcumin brand is used.
- Vitamin A and vitamin C help absorption of iron. Piperine (black pepper) likely also helps.
- Oxalates block iron absorption. Oxalate content per 100 gram often involves obscure, conflicting information, which other people have criticized too [57]:
  - **Vegetables 0-1mg:** white cabbage (3mg), iceberg lettuce (6mg), Sauerkraut (7mg), raw Chinese cabbage (6mg), cucumber (4mg), raw lettuce (5-330mg reported), romaine lettuce (5-210mg reported), .
  - **More:** brown rice (27mg), baked potato (24-97), chips (75), French fries sweet (20-51), potatoes
  - **Fruits 0-4mg:** apple (0.7mg), strawberries (4mg).
  - **Fruits 10-23mg:** banana (10mg), kiwi (16mg), orange (23mg).
  - **Vegetables 10-30mg:** mildly baked kidney beans (20mg), raw Kale (10-30 mg), raw broccoli (20mg), raw cauliflower (3-22mg), raw endive (20-110mg).

- **Nuts:** Nuts: almonds (435-491mg), cashews (175-263mg), peanut (96-148mg), pecans (12-66,mg), sunflower (12mg).
- **Vegetables 30mg or higher:** raw carrot (50mg), raw onion (50mg), spinach (550-950mg), cocoa powder (623mg), beet greens (610mg), turmeric leaves (500mg), Brussels sprouts (360mg), raw garlic (360mg), green cabbage (5-100mg), .
- 2011, issue 1, International Journal of Food Properties, 'Effect of Cooking on Soluble and Insoluble Oxalate Contents in Selected Pakistani Vegetables and Beans': *"The total oxalate content of raw spinach, carrot, beet root, white bean, red bean and soybean, were found to be 978 ... 49 ... 67 ... 158 ... 113 ... and 497 ... mg/100 g of fresh weight respectively."*

- 8 mg of iron a day is considered the minimum, but you don't need a whole lot more over this number. The 18 to 22mg of iron you often find in vitamin supplements - at least in theory, ignoring other issues to be discussed - really is too high. 45mg is the upper daily limit for iron supplementation.
- Iron is attracted to damaged tissues. It will oxidize and rot if there's too much. That's one of the reasons the body locks away excess iron into ferritin. The body also locks iron away in ferritin to prevent bad microbes from utilizing it when you're sick. This is why paying attention to ferritin levels is just as important as paying attention to iron levels.
- More on ferritin:
  - It's a container and carrier of iron.
  - Normal values for females: 40-125 ng/ml. And for males: 40-150 ng/ml. Some sources say that higher than 100 ng/ml often is associated with disease.
  - Other sources say normal or acceptable ferritin levels are 30-565ng/ml. In the Netherlands 30-400 ng/ml often is considered a normal value. Mine sat at 292 ng/ml, with lowish blood iron. And that with no less than 30 mg a day of Iron(II) biphospate supplementation, and plenty of other iron sources. This was after a month of zeolite, but also after weeks of minor and occasionally big NAC bleeding.
  - A YouTube guy went from 293 ng/ml to years later 639 ng/ml to yet 5 more months later 1,226 ng/ml. He suspected it's due to cast iron cooking pans that can leach up to 8mg per meal iron into the food. BEsides getting rid of his cast iron pans, he introduced IP6, etc. to chelate it out of his body. His values quickly started returning to semi-normal levels.
  - Ferratin is a much better marker than just blood iron marker. Ferratin can be very high, while blood iron is normal. High ferratin is considered an inflammatory marker, considering the body stores iron in ferritin to prevent the free iron from being

used by bacteria, viruses, or fungi. Low iron (due to intestinal blood loss), plus high ferritin can even be a sign of cancer.

- Phytic acid (IP6) is a very potent anti-oxidant that prevents iron damage and pulls it out of the body. Phytic acid is in nuts, seeds and vegetables.
- There have been multiple types of iron supplements, with the newer ones - iron(II) gluconate and especially iron bisglycinate - being better:
  - **Iron sulfate:** Absorption rate: 5-20% (may go to 30% with iron deficiency). Unless improvements have been made to the release structure, according to some sources, even a single dose can start to damage the gut lining by oxidative stress, espeically in the presence of high levels of vitamin C. Considerably less effective than gluconate in a study.
  - **Iron(II) fumarate:** Absorption rate: 2.5-18%. Reportedly more side effects for people with established GI issues than others.
  - **Iron(II) gluconate:** Absorption rate: Said to be very low by some sources. However, in a study considerably more effective than iron sulfate in supplementation.
  - **Iron bisglycinate:** Absorption rate: 15-30%. The newest, safest, and relatively highest bioavailable version. In various studies Iron(II) bisglycinate is either just as good as the others, with better ferritin levels; or up to 4x as effective.
- Studies on different iron supplements:
  - ncbi.nlm.nih.gov/pmc/articles/PMC7353321/: *"Oral supplements with ferrous salts (sulfate, fumarate, and gluconate) are better absorbed (10–15% bioavailability) than ferric salts of Fe complexes that are administered together with amino acids, polysaccharides, and proteins such as ovalbumin. However, high adverse gastrointestinal effects such as constipation, nausea, vomiting, diarrhea, and dark stools have been reported for ferrous Fe salts [16,17]. The amount of elemental Fe that is available to be absorbed into the body varies depending on the iron salt. Thus, the amount of elemental Fe is 20% for ferrous sulfate (FeSO4), 33% for ferrous fumarate, and 12% for ferrous gluconate. We must consider that if 100 mg of FeSO4 is equivalent to 20 mg of elemental Fe, this is approximately the RDA (18 mg/day). It has described that 50% of patients supplemented with oral Fe have gastrointestinal adverse effects induced by the direct toxicity of ionic Fe due to its caustic action on the intestinal mucosa [18].*

    ...

    The animals were stable and followed the same diet, based on feed, provided by the animal. They found that the Fe serum concentration was significantly higher in rabbits in the Fe plus BioPerine® group (36.55 ± 9.97 μg/mL at 8 h) compared to the

control group, Fe without BioPerine® (4.730 ± 0.94 µg/mL at 24 h); thus confirming that BioPerine® could be employed as a critical natural product to increase the bioavailability of elemental Fe."

- Dec. 1, 2017, American Journal of Clinical Nutrition, 'The effects of iron fortification and supplementation on the gut microbiome and diarrhea in infants and children: a review': *"In infants and young children in Sub-Saharan Africa, iron-deficiency anemia (IDA) is common, and many complementary foods are low in bioavailable iron. In-home fortification of complementary foods using iron-containing micronutrient powders (MNPs) and oral iron supplementation are both effective strategies to increase iron intakes and reduce IDA at this age. However, these interventions produce large increases in colonic iron because the absorption of their high iron dose (≥12.5 mg) is typically <20%. We reviewed studies in infants and young children on the effects of iron supplements and iron fortification with MNPs on the gut microbiome and diarrhea. Iron-containing MNPs and iron supplements can modestly increase diarrhea risk, and in vitro and in vivo studies have suggested that this occurs because increases in colonic iron adversely affect the gut microbiome in that they decrease abundances of beneficial barrier commensal gut bacteria (e.g., bifidobacteria and lactobacilli) and increase the abundance of enterobacteria including entropathogenic Escherichia coli. These changes are associated with increased gut inflammation. Therefore, safer formulations of iron-containing supplements and MNPs are needed. To improve MNP safety, the iron dose of these formulations should be reduced while maximizing absorption to retain efficacy. Also, the addition of prebiotics to MNPs is a promising approach to mitigate the adverse effects of iron on the infant gut."*
- 2002, Journal of family practice, 'Are any oral iron formulations better tolerated than ferrous sulfate?': *"Ferrous salt preparations (ferrous sulfate, ferrous gluconate, and ferrous fumarate) are equally tolerable. (Grade of recommendation: A, based on randomized controlled trial.) Controlled-release iron preparations cause less nausea and epigastric pain than conventional ferrous sulfate (grade of recommendation: A, based on randomized controlled trials), although the discontinuation rates between the 2 iron formulations were similar. Ferrous sulfate remains the standard first-line treatment of iron-deficiency anemia given its general tolerability, effectiveness, and low cost."*

- "Within each population group, no significant differences (P>0.05) in iron absorption were found between ferrous fumarate and ferrous sulfate. Mean iron absorption from ferrous fumarate vs ferrous sulfate was 17.5 vs 20.5% in women (relative bioavailability (RBV) =86), 7.0 vs 7.2% in infants (RBV = 97) and 6.3 vs 5.9% in young children (RBV = 106)."
- Nov. 2004, American Journal of Clinical Nutrition, 'Determination of iron absorption from intrinsically labeled microencapsulated ferrous fumarate (sprinkles) in infants with different iron and hematologic status by using a dual-stable-isotope method': *"There was no significant effect of dose on iron absorption (P > 0.05). Geometric mean iron absorption was 8.25% (range: 2.9–17.8%) in infants with [iron deficiency anemia] IDA (n = 32), 4.48% (range: 1.1–10.6%) in infants with [iron deficiency] ID (n = 20), and 4.65% (range: 1.5–12.3%) in iron-sufficient infants (n = 20). Geometric mean iron absorption was significantly higher in infants with IDA than in infants with ID or iron-sufficient infants (P = 0.0004)."*
- Jan. 2005, The Journal of Nutrition, 'Ferrous Sulfate Is More Bioavailable among Preschoolers than Other Forms of Iron in a Milk-Based Weaning Food Distributed by PROGRESA, a National Program in Mexico': *"Iron absorption from ferrous sulfate (7.9 ± 9.8%) was greater than from either ferrous fumarate (2.43 ± 2.3%) or reduced iron + Na2EDTA (1.4 ± 1.3%) (P < 0.01)."*
- Nov. 26, 2022, Journal of Education and Health Promotion (Iraq study), 'Comparison of the effect of ferrous sulfate and ferrous gluconate on prophylaxis of iron deficiency in toddlers 6-24 months old: A randomized clinical trial': *"120 healthy toddlers are categorized into 2 groups: FS [ferrous sulfate] group (n = 60), toddlers received 2 mg/kg/day FS supplementation, and FG [ferrous gluconate] group (n = 60), toddlers received 2 mg/kg/day FG supplementation. ... Hb < 9.5 g/dL ... were excluded. ... Anemia was defined as Hb <11.0 g/dL. ... Comparison of iron status of FS and FG groups toddlers at baseline and after 6 months of supplementation showed that there was a significant difference in hemoglobin (Hb) (10.46 vs. 12.45, P = 0.001) and ferritin level (28.08 vs. 59.63, P = 0.001)."*
- Jan. 2022, Nutrients journal, 'Efficacy and Safety of Ferrous Bisglycinate and Folinic Acid in the Control of Iron Deficiency in Pregnant Women: A Randomized, Controlled Trial': *"In conclusion, ferrous bisglycinate with folinic acid as a multivitamin nutraceutical format is comparable to standard ferrous fumarate for the clinical management of iron deficiency during pregnancy, with comparatively better absorption,*

tolerability, and efficacy and with a lower elemental iron dosage. ...

The improvements in iron absorption and tolerability were also in agreement with previous evidence [12]. Previous research has demonstrated the effective absorption of ferrous bisglycinate in celiac patients [13] and similar hematological outcomes with much lower supplement dosages in pregnant women [7,14,15]. In a pilot study by Szarfarc et al., 15 mg/day of ferrous bisglycinate was found to be comparable to ferrous sulfate in terms of maternal blood parameters, while iron depletion was significantly less frequent [7]. Ferrous bisglycinate has also proven clinically effective for preventing iron deficiency anemia (IDA) in infants [6]. This comparative study reported that while 5 mg/kg (equiv. 30–48 mg/day) of ferrous sulfate was equally as effective as a similar dose of ferrous bisglycinate for improving hemoglobin levels, the bisglycinate form was superior in terms of plasma ferritin levels and overall bioavailability. This confirms an earlier study by the same investigators showing that 30 mg iron as bisglycinate is as effective as 120 mg of ferrous sulfate in preventing IDA in adolescents [16]. A more recent clinical study on iron-deficient school-aged children showed that 30 mg of either iron sulfate or bisglycinate supplementation resulted in similar improvements; however, the bisglycinate form showed more persistent correction of ferritin levels after six-month follow-up [17]. A clinical trial by Milman et al. [14] has shown that 25 mg/day of ferrous bisglycinate resulted in similar maternal blood parameters to women who took ferrous sulfate (50 mg/day). Similarly, a more recent clinical trial in pregnant women with IDA demonstrated that ferrous bisglycinate was more efficacious in increasing Hb level than ferrous glycine sulfate. Importantly, in three of the studies outlined here, ferrous bisglycinate was associated with fewer gastrointestinal side effects and high rates of compliance during pregnancy [7,14,18]."

- Jan. 16, 2004, Nutrition journal, 'Iron supplements: the quick fix with long-term consequences': *"Co-supplementation of ferrous salts with vitamin C exacerbates oxidative stress in the gastrointestinal tract leading to ulceration in healthy individuals, exacerbation of chronic gastrointestinal inflammatory diseases and can lead to cancer. Reactive oxygen and nitrogen species (RONS) have been ascribed an important role in oxidative stress. Redox-active metal ions such as Fe(II) and Cu(I) further activate RONS and thus perpetuate their damaging effects. ...*

Studies have shown that vitamin C intake above the RDA frequently occurs and is attributed to the increase in supplementation in addition to dietary sources. A recent report gave vitamin C intake levels with 1524% RDA (50 mg) in supplement users however even in non-supplement users the recommended levels were exceeded with an average intake of 210% [2].

A daily intake exceeding the RDA was also found for other key nutrients such as iron. The daily intake of iron was found to be 1874% of the published Korean RDA (18 mg) for supplement users in comparison to 62% RDA for non-supplement users. This dramatic finding pertained to some one third of the population. Elevated ingestion of ferrous iron leads to the generation of reactive oxygen and nitrogen species (RONS), lipid peroxidation and oxidative stress [3]. High tissue concentrations of iron are associated with a number of pathologies including some cancers, inflammation, diabetes, liver and heart disease [4]."

Magnesium

- Important mineral, among other things, for preventing genetic mutations.
- Muscle cramps usually is a first sign that you have a severe magnesium deficiency.
- RDA for magnesium is 400-420mg per day for men, or 6mg/kg of bodyweight. 70kg male: 420mg. 100kg male: 600mg. 7-8mg/kg probably is really good to aim for, also to cushion any days with lower intake. Anything more than that, such as suggested by the pill pushers below, might be tough without dedicated supplementation. Only around 5,000mg a day (50mg/kg for a 100kg person) generally leads to toxicity.
  - Sep. 1, 1989, Magnesium Research journal, 'Recommended dietary amounts of magnesium: Mg RDA': *"Marginal primary magnesium deficit affects a large proportion of the population (15 to 20%), in keeping with a daily mean magnesium intake slightly over 4 mg/kg day versus the Mg RDA of 6 mg/kg day. ... Among the multiple interactions it is important to emphasize the maintenance of a Ca [calcium]/Mg ratio close to 2 in the intake."*
  - biospherenutrition.co.nz/ blogs/magnesium/how-much-magnesium-should-i-take (accessed: May 28, 2024; 2023 article; caution: supplement seller): *"Current clinical data provides evidence that with magnesium intakes below 6mg per kg, per day, negative magnesium balance is likely to develop. At*

intakes above 10mg per kg per day, strong positive magnesium balances develop which can replete suboptimal tissue stores. ... If you're a healthy individual with no obvious health concerns, aim for the lower end at 7mg per kg per day is fine. ... Daily intake for an average female should be at least 420mg per day and males 750mg per day."

- Personal analysis of daily magnesium intake: Mixed bag of nuts: 240mg. 1L of Kefir/milk: 110mg. That's 350mg. In total I get around 800mg (without any flaxseed). Optimally I would get around 1,100 mg though it seems.

- Magnesium content per 100g of various foods:
  - Flax seed has about 400mg per 100g. 33g would be 133mg more.
  - Cashews: 292mg. (my bag: 5%: 28mg)
  - Almonds 278mg. (my bag: 5%: 27mg)
  - Peanuts: 168mg. (my bag: 48%: 161mg)
  - Raisins: 32mg. (my bag: 40%: 25.6mg)
  - Milk (1L): 110mg.
  - Spinach: 79 mg.
  - Whole wheat: 78mg.
  - Peanut butter: 154mg.
  - Brown rice: 42mg.
  - White rice: 4-12mg.
  - Beef: 21mg.
  - Pork: 28mg.
  - Cheese: 28mg.
  - Egg: 10mg. Per 100g.
  - Orange: 10mg. Per 100g.
- Supplementation:
  - **Magnesium oxide:** 4% bio-availability, but the cheapest of all. Often sold in 400 mg tablets, with 16 mg bio-available.
  - **Magnesium Citrate:** 15% bio-availability. Often sold around 1,500 mg, with 225 mg bio-available. It's a mild laxative.
  - **Magnesium Biglycate:** 11.7% bio-availability. Often sold around 500 mg, with 58 mg bio-available. Mildest of all, digestion-wise.

Zinc

- A shortage of zinc can lead to a 50 to 75% reduction in testosterone levels:
  - May 1996, Nutrition journal, 'Zinc status and serum testosterone levels of healthy adults': *"Dietary zinc restriction in normal young men was associated with a significant decrease in serum testosterone concentrations after 20 weeks*

of zinc restriction (baseline versus post-zinc restriction mean +/- SD, 39.9 +/- 7.1 versus 10.6 +/- 3.6 nmol/L, respectively; p = 0.005). Zinc supplementation of marginally zinc-deficient normal elderly men for six months resulted in an increase in serum testosterone from 8.3 +/- 6.3 to 16.0 +/- 4.4 nmol/L (p = 0.02). We conclude that zinc may play an important role in modulating serum testosterone levels in normal men."

- March 2023, Journal of Trace Elements in Medicine and Biology, 'Correlation between serum zinc and testosterone: A systematic review ': *"After preliminary searching of papers on databases, 38 papers including 8 clinical and 30 animal studies were included in this review. We concluded that zinc deficiency reduces testosterone levels and zinc supplementation improves testosterone levels."*

- On average zinc has been documented to reduce the sick days for the Flu by 25%. Apparently some studies showed it to be closer to 0, but others closer to 50%. This makes it more effective for sick day reduction than vitamin C and likely vitamin D, although the latter can play a major role at prevention when high levels are maintained.
- For some zinc supplementation has reduced their acne.
- Zinc Carnosine:
  - **YouTube comment:** *"I've had inflamed prostate on and off for about 5 year. I started taking zinc carnosine for stomach problems about 3 weeks ago and boom, prostate problems completely vanished withing a week. It's great to be able to pee freely again lol."*

FLAVORING

Basil

- A lot of the same basic benefits as so many herbs: anti-microbial, improves the balance in the gut towards good bacteria, improves blood values for diabetes patients. In addition, basil might be more associate with memory improvement and lessening cognitive decline than other culinary herbs.
- Studies:
  -
  -

Black Pepper

- Black Pepper is often added to supplements, because its Piperine compound increases absorbtion of vitamins, minerals and other

compounds by up to 20x. Turmeric is a good example of that. Black pepper consists for about 9% of Piperine.

- Also by itself, Black Pepper is considered a "superfood":
  - 2013, Critical Reviews in Food Science and Nutrition, 'Black pepper and health claims: a comprehensive treatise': *"The free-radical scavenging activity of black pepper and its active ingredients might be helpful in chemoprevention and controlling progression of tumor growth. Additionally, the key alkaloid components of Piper Nigrum, that is, piperine assist in cognitive brain functioning, boost nutrient's absorption and improve gastrointestinal functionality. In this comprehensive treatise, efforts are made to elucidate the antioxidant, antimicrobial, anti-inflammatory, gastro-protective, and antidepressant activities of black pepper. Moreover, the synergistic interaction of black pepper with different drugs and nutrients is the limelight of the manuscript."*

Cacao

- One of the richest sources of flavanols, to which cacao's artery-, heart-healthy and other health benefits are attributed (60-80% of cacao's polyphenols are flavanols). No fruit can compete with the amount. Natural cocoa powder on average contains about 3,400 mg of flavanols per 100 grams (up to 8,000mg per 100 grams has been reported for biological cacao). Dark chocolate, which largely consists of cacao (next to very bad sugar) on average contains about 1,500 mg of flavanols per 100 grams. Apples and strawberries sit at about 110mg per 100 grams, and strawberries at about 140mg.
- Studies showing cacao improves heart rate max, VO2 Max and maximum exercise time; reduces blood pressure, but only when it is elevated; reduces arterial stiffness, and largely prevents declines in vascular function while sitting for extended periods of time, or when stressed, or when eating fatty foods:
  - Dec. 13, 2024, Sports journal (Basel), 'The Effect of Dark Chocolate Consumption on Arterial Function in Endurance Male Runners: Prospective Cohort Study': *"This study aimed to examine the impact of dark chocolate on endurance runners' arterial function. Forty-six male amateur runners, aged 25–55, participated. The initial assessments included clinical testing, arterial stiffness measurements, and a cardiopulmonary exercise test. The participants then consumed 50 g of dark chocolate (70% cocoa) daily for two weeks, maintaining their usual training routine. ... Systolic brachial blood pressure reduced by 2.12% ($p < 0.05$), diastolic by 2.79% ($p < 0.05$), and*

mean pressure by 2.41% (p < 0.05). Central arterial pressure also decreased... Exercise time increased by 2.16% (p < 0.05), heart rate (max) by 1.15% (p < 0.05), VO2max by 2.31% (p < 0.05), and anaerobic threshold shifted by 6.91% (p < 0.001) in exercise time and 6.93% (p < 0.001) in VO2max. In conclusion, dark chocolate improves arterial function in endurance runners, enhancing vascular health."

- Promotes vaso-dilation at a similar level as medium exercise.
- July 26, 2022, University of Surrey, 'Cocoa shown to reduce blood pressure and arterial stiffness in first real-life study; Cocoa only reduces blood pressure and arterial stiffness when elevated, a new study from the University of Surrey finds.': *"For several days, eleven healthy participants consumed, on alternating days, either six cocoa flavanol capsules or six placebo capsules containing brown sugar. ... Measurements of blood pressure and PWV were taken prior to consumption of the capsules and every 30 minutes after ingestion for the first three hours, and then hourly for the remaining nine hours. Researchers found that blood pressure and arterial stiffness were only lowered in participants if it was high, and there was no effect when the blood pressure was low in the morning. Significantly, effects were also, for the first time, identified at eight hours after cocoa was consumed. Researchers believe that this second peak may be due to how bacteria in the gut metabolise cocoa flavanols."*
- Nov. 18, 2024, University of Birmingham, 'Cocoa could protect you from the negative effects of fatty foods during mental stress - study': *"The team confirmed that consuming fatty foods with the low-flavanol drink when mentally stressed reduced vascular function (by 1.29% FMD) and lasted up to 90 minutes after the stressful event was over. The findings also showed that the cocoa drink high in flavanols was effective at preventing the decline in vascular function following stress and fat consumption. Brachial flow-mediated dilatation was significantly higher following high-flavanol cocoa compared to low-flavanol cocoa 30 and 90 minutes after the stressful period."*
- Oct. 29, 2025, University of Birmingham, 'Flavanols in cocoa can protect blood vessel function following uninterrupted sitting - study': *"Forty young healthy men, 20 who had higher levels of fitness and 20 who had a lower level of fitness, consumed either a high-flavanol (695 mg of total flavanols per beverage) or low-flavanol cocoa drink (5.6 mg of total flavanols per beverage), before completing a two-hour sitting trial. ... Both the lower and higher fitness groups who had the low-flavanol cocoa before sitting, experienced FMD [brachial Flow-*

Mediated Dilatation] declines in the arteries in their arms and legs. This suggests that higher levels of fitness do not provide protection from sitting. It also significantly increased diastolic blood pressure, decreased shear rate and blood flow in both arteries, and resulted in declines in muscle oxygenation in both fitness groups. However, the research found that those groups who consumed the high-flavanol cocoa drink, again in both fitness groups, did not experience FMD declines in either of the arteries in their arms or legs. This is the first time flavanols have been shown to be effective at preventing sitting-induced vascular dysfunction, in young healthy men."

Cayenne

- Capsaicin has an inhibiting effect on pathogenic gut bacteria as Prevotella, other Bacteroides, and also Helicobacter pylori:
  - Oct. 2007, Helicobacter journal, 'Anti-inflammatory effect of capsaicin in Helicobacter pylori-infected gastric epithelial cells': *"Capsaicin inhibits H. pylori-induced IL-8 production by gastric epithelial cells in dose- and time-dependent manner. Capsaicin as low as 100 micromol/L significantly inhibited IL-8 production in H. pylori-infected MKN45 cells (43.2% of control) at 24 hours incubation, whereas inhibited IL-8 production in H. pylori-infected AGS cells (70% of control)."*
- Experiences with regard to anti-microbial effects:
  - **YouTube comment:** *"I had a situation where the sinus and an upper tooth were connected I had no results from antibiotics in fact I had more pain I put cayenne pepper in cranberry juice [which already is strongly anti-microbial] and drank it felt the germ killing sensations and cleansing the pain and sinus problems stopped after extraction same results after implant same results healing and cleansing."*
  - **YouTube comment:** *"I've been using 1 tsp cayenne pepper, half fresh lemon juice, 1 tbs evoo [extra virgin olive oil] and 1 tbs of ACV [apple cider vinegar], add a little honey for my IBS... I was able to stop taking pantoprazole."*
- Capsaicin in Cayenne Pepper has been linked to pain relief and a number of cardiovascular health benefits, although they may not be as strong, or differ from the benefits of garlic and turmeric:
  - June 17, 2015, Open Heart journal, 'Capsaicin may have important potential for promoting vascular and metabolic health': *"In rodent studies, capsaicin-rich diets have shown favourable effects on atherosclerosis, metabolic syndrome, diabetes, obesity, non-alcoholic fatty liver, cardiac*

hypertrophy, hypertension and stroke risk. ... Dietary capsaicin ... in rodents ... promotes cholesterol export [and] stimulation of brown fat, raising metabolic rate."

- Experiences with regard to cardiovascular health:
  - **YouTube comment:** *"I'am a High blood pressure person been on medication for almost 14 years now, lately I was having chest pain, someone told me to buy this cayenne pepper, I took for 2 weeks and went in for my echo check up, to my surprise my results are normal no problem with my heart, and 1st time my bp came down to 132/78..."*
  - **YouTube comment:** *"I grew up eating lots of all kinds of hot peppers from around the world only because I love the taste. Years ago I came to the conclusion that cayenne peppers are my favorite. I'm 70 years old, I pray to God daily, never been to a hospital, and eat cayenne pepper or franks red hot sauce almost daily. Didn't realize it was so beneficial."*
  - **YouTube comment:** *"I have been using cayenne pepper and other spices at a medicated level for 1 year. Around 1 tablespoon each day for 365 days. I had a number of health related issues. All related to my heart health and they are all gone. Also, I was way overweight, I lost 65 plus pounds."*
  - **YouTube comment:** *"I doubled up on cayenne pepper and Turmeric for the cold winter months. Started to notice I would get light headed and dizzy when I stood up quickly. Checked my blood pressure (92/54) which is low. Went back to my summer intake and BP back in normal range (104/66). Seems like you can regulate and help keep BP normal range with these supplements. My light head and dizziness is gone. All Good!"*
  - **YouTube comment:** *"I started to get pain in my right leg when walking. I'm 74 and after a bit of research found taking cayenne could help with circulation which I guessed was my problem. Well it did to my amazement reduce the pain. Also which appears to have happened, I am less tired in the day, so 2 benefits."*
- Experiences with regard to allergies and stuffed sinuses:
  - **YouTube comment:** *"Cayenne pepper and turmeric. My top supplements. It also helps minimize allergies and hay fever."* **Reply:** *"Mine too!"*
  - **YouTube comment:** *"Yes! Been taking cayenne pepper with lemon and warm water and its been helping with my allergies and sinuses and also digestion."* **Reply:** *"I can confirm this! After taking Green Tea, lemon and cayenne pepper every night in just 3 days I didn't experience congestion anymore. Since im allergic to anything dairy."*

Cinnamon

- Cinnamon trees (Cinnamomum verum) natively only grew in the wild in Sri Lanka, which still produces over 80% of the world's supply. Cinnamon trees, which grow to about 18 meters high, require temperatures above 20 degrees Celsius year-round, so they can only grow in relatively few places. The trees are also commercially cultivated in southern India, the Seychelles, Madagascar and Tanzania.
- Wild cinnamon trees grow 10-18 meters tall, but cultivated trees are kept around 2–3 meters high by regular coppicing and pruning.
- Cinnamon and even more so cinnamon bark oil is among the strongest natural repellents of mosquitoes and ticks, and has very strong anti-microbial and anti-fungal characteristics. Doctors of the past even swore that cinnamon bark oil can effectively help the body kill the influenza virus.
- Anti-heart disease, anti-diabetes, anti-cancer, and anti-cognitive decline characteristics, although maybe not always as strong as various other spices:
  - Sep. 5, 2019, Journal of the American Heart Association (JAHA), 'Turmeric, Pepper, Cinnamon, and Saffron Consumption and Mortality': *"Previous studies have shown beneficial effects of cinnamon on fasting glucose and blood pressure in humans. [39], [40] ... Both in vivo and in vitro studies have shown that cinnamon decreases insulin resistance and has antitumor effects.[5]..."*
  - Feb. 2024, Nutritional Neuroscience, 'Cinnamon and cognitive function: a systematic review of preclinical and clinical studies': *"The main outcome of most studies (n = 40) proved that cinnamon significantly improves cognitive function (memory and learning). In vivo studies showed that using cinnamon or its components, such as eugenol, cinnamaldehyde, and cinnamic acid, could positively alter cognitive function. ... Most studies reported that cinnamon might be useful for preventing and reducing cognitive function impairment."*

Coriander / cilantro

- Culinary herb and plant. In the U.S., the fresh leaves are referred to as cilantro. Internationally, both the leaves and dried leaf herb is referred to as coriander.
- The plant is strongly anti-microbial in the guy in vitro and in animal studies, and at least topically in humans. It also improves diabetes symptoms and is investigated for other apparent health benefits:

- 2016, issue 3, Nutrition Today, 'Coriander: Overview of Potential Health Benefits': *"In traditional remedies, coriander was used for relief of gastrointestinal maladies, although other historical uses included as an aphrodisiac, antibiotic, a remedy for respiratory ailments and pain, and a treatment for loss of appetite and memory. Current uses being investigated include its antioxidant, antimicrobial, diabetes-modulating, and neurological benefits."*
- Ibid. *"Compared with controls, all doses of coriander extract in the drinking water and specific amounts of coriander powder in the diet (1.5% and 2.0%) significantly decreased the Escherichia coli content of ileal [i.e., final section of the small intestine] microflora without affecting the population of Lactobacillus bacteria. A significant improvement in antibody titer against Newcastle disease and infectious bronchitis was also observed for those receiving coriander extract in the drinking water. ... "*
- Ibid.: *"Coriander oil (6%) in unguentum leniens was applied to individuals with symmetric, bilateral interdigital tinea pedis [athlete's foot between the toes on both feet] for 14 and 28 days. For the entire observation period of 28 days, the clinical signs of mycosis [i.e. a fungal infection] were significantly attenuated on the side treated with coriander oil [only]... Tolerability of the coriander oil was good, and reports of pruritus and burning sensations were rare."*

- Studies show this herb/plant too has the ability to detox people's bodies from heavy metals as lead and mercury - that is, looking at rat studies:
  - June 2014, Biological Trace Element Research, 'Hydroalcoholic seed extract of Coriandrum sativum (Coriander) alleviates lead-induced oxidative stress in different regions of rat brain': *"Coriandrum sativum ... is reported to have a protective effect against lead toxicity. [We observed a] decrease [of] lead-induced oxidative stress. Treatment with the hydroalcoholic seed extract of C. sativum resulted in a tissue-specific amelioration [i.e. improvement] of oxidative stress produced by lead."*
  - Nov.-Dec. 2021, Hesham Mustafa for Avicenna Journal of Phytomedicine, 'Morphohistometric analysis of the effects of Coriandrum sativum on cortical and cerebellar neurotoxicity': *"Forty Sprague-Dawley albino rats were divided into four equal groups... Pb+ [lead] coriandrum group: received: aqueous C. sativum [coriandrum sativum] extract (600 mg/kg BW) prior to 10 mg/kg BW of Pb. ... Lead levels in blood and tissues were decreased significantly in the Pb group and those findings were corrected significantly (p=0.001) with C. sativum addition."*

Garlic

- Garlic has a long history as a medicial plant:
  - Nov. 19, 2002, Nutrition Journal, 'Effect of garlic on cardiovascular disorders: a review': *"Some of the earliest references to [garlic] are found on Sumerian clay tablets dating from 2600–2100 BC. Garlic was an important medicine to the ancient Egyptians listed in the medical text Codex Ebers (ca. 1550 BC) specially for the working class involved in heavy labor [1,2]. There is evidence that during the earliest Olympics in Greece, garlic was fed to the athletes for increasing stamina [1]. In ancient Chinese medicine, garlic was prescribed to aid respiration and digestion, most importantly diarrhea and worm infestation [3]. Three ancient medical traditions in India i.e., Tibbi, Unani and Auryveda, made extensive use of garlic as a central part of the healing efficacy of plants [2]. The leading Indian ancient medical text, Charaka-Samhita recommends garlic for the treatment of heart disease and arthritis for over many centuries. In another ancient Indian medical textbook, Bower Manuscript (~300 AD), garlic was used for fatigue, parasitic disease, digestive disorder and leprosy [4]. With the onset of Renaissance, increasing attention was paid in Europe to the medical use of garlic. A leading physician of the 16th century, Pietro Mattiali of Siena, prescribed garlic for digestive disorders, infestation with worms and renal disorders, as well as to help mother during difficult childbirth [2]. In England, garlic was used for toothache, constipation, dropsy and plague [4]."*
- Daily fresh garlic supplementation seems to lower the chance of getting a cold by 63%, and, if you still get it, to result in a 20% quicker recovery time - according to one 2014 study. A 2000 Korean study demonstrated that ingesting raw garlic required ~110× more virus in mice to reach 50% mortality than controls. For a flu vaccine it was ~13× more virus compared to controls: *"10 times higher [Defense Index] than the [influenza] vaccination"* If the mice percentages are converted to human consumption levels, it would probably be 1-2 cloves a day, depending on the weight of individuals (here 50kg (110lb) to 100kg (220lb)). Garlic likely did the viral killing itself, instead of increasing antibody production, as the vaccine does. Smelling garlic fumes and chewing it honey has also been used by healthcare practitiors working with influenza patients to prevent getting sick themselves:
  - Nov. 11, 2014, Cochrane Database of Systematic Reviews, 'Garlic for the common cold': *"This trial randomly assigned 146*

participants to either a garlic supplement (with 180 mg of allicin content) or a placebo (once daily) for 12 weeks. The trial reported 24 occurrences of the common cold in the garlic intervention group compared with 65 in the placebo group (P value < 0.001), resulting in fewer days of illness in the garlic group compared with the placebo group (111 versus 366). The number of days to recovery from an occurrence of the common cold was similar in both groups (4.63 versus 5.63) [note: this is not "similar", it's 20% quicker recuperation for the garlic group]."

- Feb. 1, 2000, Journal of the Korean Society of Food Science and Nutrition, 'Effects of Garlic Extract for Protecting the Infection of Influenza Virus': *"This study was designed to verify the efficacy of garlic extracts for protecting the infecton of influenza and Japanese B encephalitis virus. Influenza virus (AO/PR8 strain) and Japanese B encephalitis virus (JaGAr 01 strain) were used to attack mouse through nasal route and each vaccines were injected subcutaneously. 0.002 and 0.2 mL/day of garlic extracts were orally administered to mice [**Note:** 0.2mL/day seems to be roughly comparable to 0.75 to 2 garlic cloves a day, depending on whether a persons weighs 50kg (110lb) or 100kg (220 lb)].*

  The blood and serum samples were taken from the mice to measure LD50, Defense Index (DI), virus-neutralizing antibody for comparing virus influence inhibiting activities. Defense indices of the male and female mice were not significantly different at every experiment.

  Vaccination effectively inhibited the influence of influenza virus and 0.002 mL/day garlic extract (0.55?.05) resulted in significantly higher DI than the control (0?.05) (p<0.05). Although 0.002 mL/day garlic extract (0.55?.05) resulted in significantly lower DI than the vaccination (1.10?.05), 0.2 mL/day garlic extract (2.05?.05) resulted in 10 times higher DI than the vaccination (1.10?.05).

  Garlic extract did not affect DI in Japanese B encephalitis virus influence of the vaccinated mouse, but significantly reduced DI of the non-vaccinated mouse (p<0.05). Garlic extracts did not affect the production of the neutralizing antibody against influenza by vaccination. However, neutralizing antibody production of Japanese B encephalitis was accelerated by vaccination. Consequently, the current study proved the efficacy of garlic on inhibition of influenza virus. Finally, it is very hard to show the higher preventing effect on flu through ingestion of garlic as a food than vaccination."
- Jan. 2000, no. 1, Journal of the National Medical Association, 'A strategic call to utilize Echinacea-garlic in flu-cold seasons.'

(Arab author working in Florida, with Synergy Nutritional Industries backing the study in some form): *"Anecdotal and growing scientific data about the herbs, garlic and Echinacea, suggest that the administration of herbal preparations ... should be part of any international planning to prevent virulent seasonal and pandemic strains of the flu. ...*

Many who had worked with cold-flu patients through several seasons gave impressive accounts that they had never had an acute upperrespiratory tract infection [while using the below two garlic and coneflower therapies]. ...

How did these health providers administer these two herbs for the prophylaxis and cure of the common cold and influenza? They relayed to me that ... in its crude or raw form, Echinacea was administered orally with a cup of tea sweetened with honey or unsweetened once daily for prophylaxis and twice daily for cure. ... Theoral administration of raw garlic involved masticating or mincing a clove with honey once daily for prophylaxis and twice daily for cure. This garlic preparation is chewed and retained in the oral cavity as long as possible for the liberated volatile compounds to penetrate and be absorbed by the tissues of the mouth, nasopharynx, and sinuses. Many inhaled these fumes into the pulmonary spaces and exhaled them with a closed mouth through the nostrils.

Before ingestion, many related directly of inhaling sliced or minced garlic into the nostrils or from a container that could be opened and closed. After nasal administration and oral retention, they would swallow the raw or crude preparation where numerous beneficial compounds and components would be absorbed by the gastrointestinal tract. ...

We are also grateful to the Synergy Nutritional Industries of Ft Walton Beach, FL for their contribution..."

- After it has been absorbed by the intestines, garlic acts as natural antibiotic throughout the bloodstream. While effective in many ways, a good portion of its potency is lost though compared to how effective garlic's allicin fumes alone kill bacteria in its vicinity. In complete contrast to antibiotics, garlic actually improves the gut microbiome.
  - Oct. 12, 2017, Molecules journal, 'Diallylthiosulfinate (Allicin), a Volatile Antimicrobial from Garlic (Allium sativum), Kills Human Lung Pathogenic Bacteria, Including MDR [Multi-Drug-Resistant] Strains, as a Vapor': *"Allicin was synthesized (>98% pure) by oxidation of diallyl disulfide by H_2O_2 using formic acid as a catalyst and the growth inhibitory effect of allicin vapor and allicin in solution to clinical isolates of lung pathogenic bacteria from the genera Pseudomonas, Streptococcus, and*

Staphylococcus [MRSA], including multi-drug resistant (MDR) strains, was demonstrated."

- This author has noticed that it takes two large cloves of *raw* garlic (at 104kg / 230lb male bodyweight) to kill all stinky feet odor. You can let your feet marinate in tight shoes in the hot summer sun for hours on end, and there will be zero odor when you take them off. Even in a crowded cantine, you can take off your shoes and put your feet up on a chair or table without any smell. There's no smell, whatsoever. In contrast, in my case, without raw garlic, I would have superheavily stank up several square meters. Dried garlic powder was tried as well, because it is easier to take, but it did nothing for the smell. So it clearly is the allicin that did the work.
- July 27, 2021, Frontiers in Microbiology, 'Antibacterial Properties of Organosulfur Compounds of Garlic (Allium sativum)': *"Several studies have evaluated the antibacterial activity of various garlic preparations such as crude or fresh garlic extract (FGE), and garlic paste. The antibacterial activity of garlic paste and FGE against commensal and pathogen enteric bacteria such as Escherichia coli, E. coli O157:H7, Salmonella species, Shigella species, Vibrio species, Campylobacter species, Listeria monocytogenes, Enterobacter, and Enterococcus species, Lactobacillus acidophilus, Staphylococcus aureus, Streptococcus species, and Clostridium difficile has been reported by various laboratories (Johnson and Vaughn, 1969; Kumar and Berwal, 1998; Ross et al., 2001; Gupta and Ravishankar, 2005; Vuddhakul et al., 2007; Lu et al., 2011b; Jain et al., 2015a; Roshan et al., 2017). ...*
  The causative agent of gastric ulcers, Helicobacter pylori (standard strains types and clinical isolates), was found to be sensitive to GP [Garlic Powder] and 1,000 μg/ml of GP inactivated H. pylori at 6 h in a time course viability assay (O'Gara et al., 2000).
  Allicin-rich crude [garlic] extract exhibited better antibacterial activity against Mycobacterium phlei, Mycobacterium smegmatis, and Mycobacterium tuberculosis compared to [the usually assigned mainstream antibiotics] Isoniazid and Ethambutol. Also, disk diffusion assay with allicin-rich extract exhibited significant activity against MRSA [a.k.a. staph infections] (Viswanathan et al., 2014). Another study also found that FGE [fresh garlic extract] was effective against MDR strains of E. coli, Pseudomonas aeruginosa, Klebsiella pneumoniae, Serratia marcescens, and MRSA in both in vitro and in vivo assays (Farrag et al., 2019). ...
  Garlic was found to positively influence the gut microbiome and protect the gut microbiome damage from high-fat diet

(Chen et al., 2019). Supplementing feed of farrowing sows and European bass with GO decreased pathogenic microbes from the gut microbiome (Rimoldi et al., 2020; Satora et al., 2020). Allicin treatment prevented high carnitine diet-induced dysbiosis to lower the atherosclerosis risk factor trimethylamine N-oxide that is produced by the gut microbiome (Wu W. K. et al., 2015). Oral administration of alliin, precursor of allicin, to rats resulted in decreasing the relative abundance of only Allobaculum genus in the cecum (Zhang C. et al., 2019). The gut microbiome was altered upon intragastric administration of DADS of rat, a low dose of DADS decreased Bacteroidetes phyla but increased Firmicutes phyla bacteria (Yang et al., 2019). Oral administration of propyl propane thiosulfonate [part of fresh garlic] restored the richness and evenness of gut microbiome lost due to dextran sodium sulfate-induced colitis in mice (Vezza et al., 2019). In a small-scale clinical trial, aged garlic extract supplementation for 3 months increases the richness and diversity of the gut microbiome with increase in Lactobacillus and Clostridium species (Ried et al., 2018). All the studies indicate that garlic and its compounds have a positive effect on gut microbiome composition and richness. However, the mechanistic details still need to be investigated.

In a recent study from our laboratory, FGE exhibited activity against MDR Shiga-toxin producing E. coli (STEC) isolates from clinical and food samples (Bhatwalkar et al., 2019). In addition to antibacterial activity, garlic crude and aqueous extract exhibited anti-adherent activity against the standard strain type of Streptococcus mutans (Jain et al., 2015a)."

- Garlic, even its dried and powdered form, removes soft plaque from the arteries, and makes the arteries more supple:
  - Jan. 22, 2016, Daily Mail, 'Garlic REALLY is good for you: Extract 'reverses build-up of deadly plaque that clogs arteries and triggers heart attacks; Aged garlic extract reduces plaque buildup in arteries, a study found; Participants who took the supplement for a year had 80% less plaque'.' (Aged Garlic Extract (AGE) was used: sciencedirect.com/science/article/pii/S0022316623005254 (accessed: April 29, 2024)): *"Lead study author Dr Matthew Budoff said: 'This study is another demonstration of the benefits of this supplement in reducing the accumulation of soft plaque and preventing the formation of new plaque in the arteries, which can cause heart disease.' ... It also suggested garlic could even prevent age-related neurological diseases such as Alzheimer's and Parkinson's."*

- Feb. 2020, Experimental and Therapeutic Medicine, 'Effects of aged garlic extract on arterial elasticity in a placebo-controlled clinical trial using EndoPAT™ technology': *"Cardiovascular diseases are the main cause of death in the industrialized world, with the main risk factors being elevated blood pressure and blood lipid levels, leading to arterial stiffness and arteriosclerosis. In this study, we examined the effect of aged garlic extract (AGE) on arterial elasticity... This randomized double-blind, placebo-controlled clinical trial examined 57 subjects over a period of 12 weeks, with EndoPAT™ measurements taken at 0 and 12 weeks; in addition, changes in blood pressure were analyzed. The positive effect of AGE on blood pressure values previously reported was confirmed. The results revealed a significant decrease in blood pressure in the AGE group... The AGE group exhibited a significant improvement in arterial elasticity, measured as AI75, by 21.6%."*
- Jan. 26, 1998, Ohio State News, 'Garlic and arteries: Garlic Prevents Hardening of Aorta, New Study Shows': *"Ohio State University [and] researchers from the Centre for Cardiovascular Pharmacology in Mainz, Germany ... measured the stiffness of the aorta in more than 200 German men and women, half of whom took 300 mg or more of standardized garlic powder in tablet form every day for two years. The subjects who took garlic supplements demonstrated a 15 percent lower average aortic stiffness than subjects who did not."*

- Garlic can be used to counter the effects of Alzheimer's Disease and other forms of dementia:
  - March 2006, Journal of Nutrition, 'Garlic Reduces Dementia and Heart-Disease Risk.': *"Inhibition of cholesterol, LDL oxidation, and platelet aggregation by AGE [Aged Garlic Extract], inhibits arterial plaque formation; AGE decreases homocysteine, lowers blood pressure, and increases microcirculation, which is important in diabetes, where microvascular changes increase heart disease and dementia risks. AGE also may help prevent cognitive decline by protecting neurons from Abeta neurotoxicity and apoptosis, thereby preventing ischemia- or reperfusion-related neuronal death and improving learning and memory retention."*
  - Aug. 2, 2018, Curtin University (curtin.edu.au), 'Could garlic hold the key to curing Alzheimer's disease?': *"Mounting evidence [is] suggesting [that garlic] is linked to breaches in the blood-brain barrier, ... The researchers later found that aged garlic extract, an odourless product widely available in*

Australian pharmacies and even some convenience stores, can completely prevent the breakdown of blood-brain barrier."

- The allicin in raw garlic, and maybe other components, is able to remove heavy metals from the body:
  - Dec. 1987, Journal of Korean Medical Science, 'A study on the effect of garlic to the heavy metal poisoning of rat' (PDF; does show DMSA often superior): *"When garlic (Allium sativum) was administered to rat per os [sic] simultaneously with cadmium, methylmercury and phenylmercury to detect the protective effect against the heavy metal poisoning, accumulation of heavy metals in liver, kidneys, bone and testes were decreased, and histopathological damages ... reduced. ... The protective effect of garlic was superior to those of 2,3 dimercapto-1-propanol (BAL) and D-penicillamine (PEN), and nearly similar to those of 2,3-dimercaptosuccinic acid (DMSA) and N-acetyl-DL-penicillamine (APEN), the current remedies, while garlic was not effective as a curative agent for heavy metal poisoning."*
  - Feb. 2012, Food and Chemical Toxicology journal, 'Comparative study on the efficacy of Allium sativum (garlic) in reducing some heavy metal accumulation in liver of wistar rats': *"This study was undertaken to compare the therapeutic efficacy and protective ability of garlic extracts on reducing toxicity induced by mercury, lead and cadmium in the liver. Rats were fed with rat chow mixed with raw garlic (7% w/w) while mercury (10ppm), cadmium (200ppm) and lead (100ppm) were given in drinking water. Garlic was administered either at the same time with the metals (group 2), a week after exposure to heavy metals (group 3) or a week before heavy metal exposure (group 4) for 6 weeks. ... Analysis between the groups showed that garlic treatment after exposure had a significantly (P<0.05) higher percentage protection when compared with other modes. These results suggest that garlic offered more hepatoprotective effect to cadmium followed by mercury and least protection to lead at the selected dose of each metal in this study through the processes of uptake, assimilation and elimination of these metals."*
  - May 2012, Basic & Clinical Pharmacology & Toxicology journal, 'Comparison of therapeutic effects of garlic and d-Penicillamine in patients with chronic occupational lead poisoning': *"Previous studies on animals have revealed that garlic (Allium sativum) is effective in reducing blood and tissue lead concentrations. The aim of this study was to investigate therapeutic effects of garlic and compare it with [medical chelator] d-penicillamine in patients with chronic lead*

poisoning. ... Blood lead concentration (BLC) of 117 workers at a car battery industry were investigated. ... The workers were randomly assigned into two groups of garlic (1200 µg allicin, three times daily) and d-penicillamine (250 mg, three times daily) and treated for 4 weeks. BLC was determined again 10 days post-treatment. Clinical signs and symptoms of lead poisoning were also investigated and compared with the initial findings. Clinical improvement was significant in a number of clinical manifestations including irritability (p = 0.031), headache (p = 0.028), decreased deep tendon reflex (p=0.019) and mean systolic blood pressure (0.021) after treatment with garlic, but not d-penicillamine. BLCs were reduced significantly (p=0.002 and p=0.025) from 426.32±185.128 to 347.34±121.056 µg/L ***[a 19% drop in 4 weeks]*** *and from 417.47±192.54 to 315.76±140.00µg/L* ***[a 24% drop in 4 weeks]*** *in the garlic and d-penicillamine groups, respectively, with no significant difference (p=0.892) between the two groups. The frequency of side effects was significantly (p=0.023) higher in d-penicillamine than in the garlic group. Thus, garlic seems safer clinically and as effective as d-penicillamine. Therefore, garlic can be recommended for the treatment of mild-to-moderate lead poisoning."*

- Jan. 2015, Nutrients journal, 'Dietary Strategies for the Treatment of Cadmium and Lead Toxicity': *"Table 2. Selected studies on the protective effects of edible plants against Cd [cadmium] and Pb [lead] toxicity. ... Garlic: ... 250 or 500 mg/kg b.w. garlic extract orally. [For] 30 days [to] male mice... Garlic decreased the Pb [lead] burden and recovered immunological parameters in the blood and tissues. ...*

  Garlic is also a well known medicinal plant. Garlic extract alleviates Pb-induced neural, hepatic, renal and haematic toxicity in rats and protects against Cd-induced mitochondrial injury and apoptosis in tissue culture models [73,74,75,76]. Based on these studies, garlic's protective property against Cd and Pb toxicity can be attributed to (1) its antioxidative ability, provided by organo-sulphur compounds such as diallyl tetrasulfide; (2) its chelation ability, provided by sulphur-containing amino acids and compounds with free carboxyl and amino groups, which in turn promotes the excretion of Pb or Cd from the body; and (3) the prevention of Cd and Pb intestinal absorption, by its sulphur-containing amino acids such as S-allyl cysteine and S-allyl mercaptocysteine. Ginger and onion have similar antioxidant capacities to garlic, and supplementation with these food ingredients gave protection against Pb-induced renal and developmental toxicity and Cd-

induced gonadotoxic and spermiotoxic effects in rats [77,78,79]."

- A 110-year-old Indian man in the United States, who still could talk coherently when interviewed by ABC15 Arizona in 2011, daily ate garlic, honey, cinnamon, chocolate and olive oil.
- Many people let crushed garlic be absorbed in olive oil to create a potent anti-microbial and anti-viral tonic. It might be best to replace the old garlic with fresh garlic about 10 minutes before applying it. Allicin loses it's potency within a few hours, although other aspects of garlic extract still form a potent anti-microbial defense. This way one should get both the allicin and less-fleeting components of garlic extract inside olive oil.

Ginger

- Similar to garlic, onions, and turmeric, ginger can detox the body of heavy metals as lead. [58]
- Used with success by people with gastritis, because it stimulates the stomach. Often used in combination with artichoke for small intestine bacterial overgrowth (SIBO), because artichoke heavily moves the small intestine.
- Used in tea, because it serves as a natural paracetamol.
- No further research yet.

Ginseng

- Not researched yet.

Lavender

- Famous culinary and aromatic herb. It has a relaxing effect on people.
- Studies:
  - April 29, 2016, Northumbria University, 'Herbs that can boost your mood and memory': *"150 healthy people aged 65 and over were placed in rooms which had been scented with rosemary and lavender essential oils, or a control room which had no scent. ... Those who had been in the rosemary scented room displayed significantly enhanced prospective memory, with test scores 15% higher than those who had been in the room with no aroma. They were also more alert. In contrast, those who had spent time in the lavender scented room displayed*

significantly increased calmness and contentedness, with a decrease in their ability to remember to do something at a given time."

Onions

- Similar to garlic, onions have many health benefits, including anti-cancer and anti-heavy metal effects. They are not as strongly anti-microbial as the more pugnant garlic it appears.
- Quercetin, which red onions have the most of, has its own benefits though. It appears to be more potent, for example, in combating sinusitis inflammation. It is often marketed as a supplement alongside the similarly anti-inflammatory bromelain. And in case of sinusitis, NAC would be another excellent supplement to mix it with.
  - Jan. 2021, Iranian Journal of Basic Medical Sciences, 'The effects of Allium cepa L. (onion) and its active constituents on metabolic syndrome: A review': *"Onions ... display broad-spectrum activities including anti-oxidant, anti-inflammatory, lipid-modifying, anti-obesity, antihypertensive, and antidiabetic effects."*
  - Nov. 2002, Phytotherapy Research journal, 'Onions--a global benefit to health': *"Onions are rich in two chemical groups that have perceived benefits to human health. These are the flavonoids and the alk(en)yl cysteine sulphoxides (ACSOs). ... Compounds from onion have been reported to have a range of health benefits which include anticarcinogenic properties, antiplatelet activity, antithrombotic activity, antiasthmatic and antibiotic effects."*
  - May 29, 2023, ClevelandClinic.org), 'Stop the Tears: Why Onions Are Good for You': *"A 2019 study found that consuming 35 pounds of onions and other allium vegetables every year may lower your risk of colorectal (colon) cancer by almost 80%. Most Americans consume about 22 pounds of onions in a year, according to the National Onion Association. ...*
    Additional studies suggest that an onion-rich diet may lower your risk of: Bladder cancer. Brain cancer. Breast cancer. Lung cancer. Ovarian cancer. Stomach cancer. ...
    Onions are a rich source of prebiotics and fiber. "Gut bacteria break down insoluble or undigested fiber, causing fermentation," says Culbertson. "In this way, onions serve as a prebiotic or food source for the bacteria, which aids digestion." Unfortunately, this fermentation can also cause gas and bloating. "Cooked onions are easier to digest and less likely to cause digestion problems than raw onions," shares Culbertson.
    ..."

Another study suggests that women and people assigned female at birth (AFAB) over 50 who eat an onion a day may: Improve bone density by 5%. Reduce their risk of hip fracture by 20%." **2019 cancer study in question:** Feb. 20, 2019, Asia-Pacific Journal of Oncology, 'Allium vegetables are associated with reduced risk of colorectal cancer: A hospital-based matched case-control study in China'.

- Jan. 2015, Nutrients journal, 'Dietary Strategies for the Treatment of Cadmium and Lead Toxicity': *"Table 2. Selected studies on the protective effects of edible plants against Cd [cadmium] and Pb [lead] toxicity. ... Onion: ... 5 mL/kg b.w. onion extract by oral gavage. [For] 4 weeks [to] male rats exposed to 15 mg/kg b.w. Cd [cadmium]... Onion reduced testicular oxidative damage and alleviated spermiotoxicity."*
- December 2008, Food and Chemical Toxicology, 'Protective roles of onion and garlic extracts on cadmium-induced changes in sperm characteristics and testicular oxidative damage in rats': *"Cadmium (Cd) is known to exert gonadotoxic and spermiotoxic effects. The present study was performed to assess the possible protective roles of onion (Allium cepa Linn) and garlic (Allium sativum Linn) extracts on Cd-induced testicular damage and spermiotoxicity. ... Cd intoxication significantly ($p<0.001$) decreased epididymal sperm concentration and sperm progress motility, increased percent total sperm abnormalities and live/dead count [and other issues]. Both extracts successfully attenuated these adverse effects of Cd. Onion extract offers a dose-dependent protection. Our study demonstrated that aqueous extracts of onion and garlic could proffer a measure of protection against Cd-induced testicular oxidative damage and spermiotoxicity by possibly reducing lipid peroxidation and increasing the antioxidant defence mechanism in rats."*
- April 2018, Journal of Food and Drug Analysis, 'Systematic study on active compounds as antibacterial and antibiofilm agent in aging onions': *"*

  - Storage dependent study was done on six varieties of red, white and yellow skinned onion.

  - Total phenolic and antioxidant activity increased after three month storage in all onion varieties.

  - Antibacterial and antibiofilm activities increased in yellow and red type of onion [by about 10% after 3 months, but had declined 20-30% from its peak by 6 months].

  - White type didn't show any antibacterial and antibiofilm activities. ...

  In addition to quercetin, onion produces allicin, which is sulfur

containing volatile compound and exists in intact onions. The antibacterial activity of onion is mostly due to the allicin (thiosulfinates) [40]. However, these volatile compounds have limited use regarding food preservation because of their strong flavor and biochemical instability [41]. ...

At the concentration of 50 µg/mL, extract of red onion showed the reduction rate of 59.5% and 61.5% against S. aureus and P. aeruginosa. Activity of the yellow onion extract was found to be quite promising compared with white onion. The aged and deteriorated yellow and white onions did not show any inhibition against the biofilm formation."

- Sep. 2025, Molecular Biology, 'Quercetin Alleviates the Progression of Chronic Rhinosinusitis Without Nasal Polyps by Inhibiting Nasal Mucosal Inflammation and Epithelial Apoptosis' (Chinese study).

Neem

- Medicial tree from India known as Havintha Azadirachta Indica.
- Few studies have been done, but Neem clearly is a (very) strong antimicrobial, and seems to be capable of inhibiting, and often a curing, candida and intestinal parasites:
  - 2014, Brazilian Journal of Oral Studies, 'Antifungal efficacy of Azadirachta indica (neem) - An in vitro study': *"Aim: To evaluate antimicrobial ability of neem leaf extract, 3% sodium hypochlorite (NaOCl) [i.e. bleach] and 2% chlorhexidine (CHX) [a popular oral antiseptic and disinfectant] against Candida albicans. ... There was no significant difference observed between Neem extract and 3% NaOCl. Conclusions: Efficacy of Neem extract is comparable to 3% NaOCl against C. albicans and it is significantly better than 2% CHX. ...*

    NaOCl and CHX at various concentrations have been proven effective against C. albicans but they have certain disadvantages [of killing everything]. In dentistry, Neem has been investigated due to its antimicrobial potential against oral microorganisms especially those associated with gingivitis and periodontitis [10]."
  - 2015, Journal of Parasitic Diseases, 'Anthelmintic efficacy of crude neem (Azadirachta indica) leaf powder against bovine strongylosis': *"The present study was conducted to evaluate the anthelmintic efficacy of crude neem (Azadirachta indica) leaf powder against strongyle infections in cattle. Based on copro-examination, 30 cattle positive for strongyle infection with at least 250 [eggs per gram (EPG) of faeces] were selected and grouped...*

Group A was treated with fenbendazole (Panacur®) at a dose rate of 5 mg/kg body weight as a single oral dose. Group B was treated orally with a single dose of crude neem leaf powder @ 500 mg/kg body while the animals of Group C remained as infected untreated control. The approximate dose of neem leaf powder was calculated as per Ali (2005) who used similar dose rate and reported 53.6 % efficacy against Gastrodiscus in horse. The animals treated with neem leaf powder were kept under observation for 24 h. for any toxicity issue and no abnormal changes in their physiological parameters were detected. ...

The mean EPG [eggs per gram (EPG) of faeces] of the Group A, B and C on day 0 was 400 ± 25.82, 380 ± 19.44 and 395 ± 35.32, respectively. After day 7 post treatment the mean EPG was recorded as 60 ± 19.44, 85 ± 66.88 and 430 ± 37.42, respectively. These results indicated a significant ($p < 0.05$) decrease in EPG in Group A and Group B at day 7 post treatment. On day 14 post treatment the EPG was recorded as 0 in Group A, 5 ± 5 in Group B and 420 ± 35.90 in Group C which revealed that on day 14 post treatment the animals of Group B showed significantly low ($p < 0.05$) EPG as compared to that of day 7 post treatment. No infection was detected in Group A and B at day 28 post treatment but Group C exhibited an EPG of 430 ± 24.94. During the current study it was also observed that there was no significant ($p > 0.05$) changes in EPG of the animals of control group. Fenbendazole exhibited 85 and 100 % efficacy on day 7th and 14th of post treatment in Group A whereas crude neem leaf powder exhibited 78, 98 and 100 % efficacy on day 7th, 14th and 28th in Group B, respectively. The detailed findings of the present study have been shown in Table 1."

- Good Neem experiences:
  - **YouTube comment:** *"I cured IBS with this trick.. [neem and curcumin balls]"*
  - **Reddit comment:** *"I had Candida, SIBO and parasites for years about 5 years, I tried everything spend thousands seeing every specialist all told me bullshit, about cut this food diet all this bullshit. In the end I got better within 2 weeks using Neem & Turmeric Balls twice a day at morning & night killed every parasite killed all candida. Try it and thank me later. Have Fun."*
  - **Reddit comment:** *"Pretty sure a month of Neem, berberine and allicin got rid of my methane SIBO. I use it occasionally for maintenance as well."*
- Bad or less good Neem experiences:

    - **Reddit comment:** *"Took berberine for about 2 weeks and it was doing me so well. Was fixing my dysbiosis, and killing off mold in me. I then switched to neem and it wrecked my gut. More histamine and puffier face. "*
- For most people Neem will taste terrible having to mix it into foods. However, making "neem balls", similar to "turmeric balls" (this author prefers to call them "pills"), make this compound much easier to swallow. Neem:
    - Mix 1 (volume) part neem with .75 part water.
    - For turmeric, mix 1.5 part turmeric with 1 part water.
    - Stir and in about 10 seconds a clay-like substance starts to emerge.
    - The above ratios make sure the "clay" is relatively thick and dry, and therefore easy to roll into various shapes with your fingers.
    - Traditionally Indians rolled the neem and/or turmeric in balls, from which they broke pieces. This is possible, but you can also pre-make a whole bunch of pill-shaped neem and turmeric "balls".
    - Don't make them bigger than general supplement pills. You don't want them to get stuck into your throat, especially not when dried up and hard.
    - It seems the original recipe didn't account for curcumin only being fat soluble, and at the very least needing pepper to make it into the bloodstream. So eat these balls with a bit of fat and pepper, just to be sure.
- Anti-mosquito spray based on Neem have been getting great reviews, also from people who realized that Lavender trees and such do not repel mosquitoes.

Radishes

- Radishes seem to have a lot of overlapping health benefits with onions and garlic.
- Great to get mucous out of the body, improve gut health, and very anti-cancer.

Rosemary

- Famous herb, already in Ancient Egypt, Greece and Rome.
- Studies:
    - June 18, 2019, Scientific Reports journal, 'Rosmarinic acid suppresses Alzheimer's disease development by reducing amyloid β aggregation by increasing monoamine secretion'.

- April 29, 2016, Northumbria University, 'Herbs that can boost your mood and memory': *"New research from Northumbria University: ... In one study, the researchers asked 180 volunteers to consume either a chamomile or peppermint tea drink and tested their cognition and mood before and after drinking. A control group drank hot water for comparison. They found that peppermint enhanced and aroused both mood and cognition, helping to improve long term memory, working memory and alertness, while chamomile had a calming and sedative effect which significantly slowed memory and attention speed.*
  In a separate study, 150 healthy people aged 65 and over were placed in rooms which had been scented with rosemary and lavender essential oils, or a control room which had no scent. ... Those who had been in the rosemary scented room displayed significantly enhanced prospective memory, with test scores 15% higher than those who had been in the room with no aroma. They were also more alert. In contrast, those who had spent time in the lavender scented room displayed significantly increased calmness and contentedness, with a decrease in their ability to remember to do something at a given time."
- June 25, 2025, The Conversation, 'Rosemary has been linked to better memory, lower anxiety and even protection from Alzheimer's'.

Salt

- Powerfully anti-microbial. In the first seconds already it can draw infected fluid out of inflamed wounds (such a gum pockets) and weaken bacteria's biofilms, breaking their bonds to each other and to surfaces. As salt's osmosis effect (absorbing water) continues, over the hours it can kill a wide variety of salt-sensitive bacteria. These include E. coli, Salmonella, Shigella, Bacterium botulinum, Campylobacter, Streptococcus mutans (generally concentrations around 5% inhibit them and above 10% kill them), as well as various molds (Rhizopus, Mucor) and some yeasts. This is why salt for millenia has been an important food preservative.
- Personal experience:
  - Personal experience tells this author that cheap table wipes out bad mouth bacteria in seconds. Or better said: the biofilms. Since using salt water in a waterpik, gum irritations and infections have been near zero (you do need a brush to poke out some of the stuck particles, depending on the state of your gums). Originally, severe gum infections were reduced to

almost nothing by blasting in salt water with a water pik. It's painful, but works - although eventually you generally do need to clean with an alcohol-infused hook below the gum line to prevent the infection from increasing again.

- Personal experience tells this author too that ear infections can be heavily reduced or cured by mixing salt water with coconut oil (or olive oil) and dropping that in the ear canal. The salt kills the infection, the oil often aids a little in this (or at least containing the infection) while crucially restoring any skin irritation.

Tarragon

- Culinary and aromatic herb formally known as Artemisia dracunculus. It is sometimes sold under the name Dragon. Frech tarragon has the most flavor. Russian tarragon is considered largely useless as a culinary herb. Mexican tarragon sits somewhere in between.
- Studies show that giving people with pre-diabetes or diabetes 1 or 2 grams of tarragon a day can improve their symptoms of insulin resistance by 20-23% over a period of 2 months:
  - June 12, 2025, Vinmec Healtcare System, '8 Surprising Benefits and Uses of Tarragon': "A study in diabetic animals showed that Tarragon extract reduced blood glucose levels by 20% compared to a placebo group. [In another] randomized, double-blind study looked ... patients [with] impaired glucose tolerance ... given 1,000 mg of Tarragon before breakfast and dinner showed reduced insulin secretion."
  - Feb. 1, 2021, issue 1, Jundishapur Journal of Natural Pharmaceutical Products, 'Effects of Tarragon Powder on Glucose Metabolic Changes, Lipid Profile and Antioxidant Enzyme Levels in Type 2 Patients with Diabetes: A Randomized, Double-Blind, Placebo-Controlled, Clinical Trial' (Iranian study; Summary: 23% improvement in tarragon group only): *"The intervention group [of 30 people] received a tarragon capsule (500 mg) 3 times a day [for 8 weeks], and the control group [of 30 people] received placebo capsules. ... Results: In the tarragon receiver group [everything] significantly improved, compared to the placebo group...*
    FBS [Fasting blood glucose], mg/dL: Baseline 163.1 [vs] 159.07... End: 123.07 [vs] 160.11 [i.e. a 25% improvement in the tarragon group vs a 0.7% worsening in the placebo group]. ...
    2-hp [postprandial glucose], mg/dL: ... Baseline 196.02 [vs] 199.13... End: 159.14 [vs] 199.27 [i.e. a 19% improvement in the tarragon group vs no difference in the placebo group] ...

Insulin, µU/mL: ... Baseline 12.07 [vs] 12.39... End 10.01 [vs] 12.69... [i.e. a 17% improvement in the tarragon group vs a mild worsening in the placebo group...
HOMA-IR: Baseline 4.86 [vs] 4.84 ... End: 3.04 [vs] 5.01 [i.e. a 37% improvement in the tarragon group, versus a 3.5% worsening in the placebo group...
HbA1c [glycated hemoglobin], %: Baseline 8.07 [vs] 7.9... End 6.6 [vs] 7.85... [i.e. an 18% improvement in the tarragon group, versus a 0.6% improvement in the placebo group.]"

- Similar to other culinary herbs, tarragon oil is known to inhibit bacteria as staph and E. coli. The general characteristics of reducing inflammation may be of benefit to people suffering from (osteo)arthritis.
- Tarragon, similar to other herbs in the Artemisia family, may improve sleep in people. It has done so in mice.

Thyme

- Culinary and aromatic herb. The most commonly cultivated version, Thymus vulgaris, is native to Southeast Europe.
- Thyme oil is listed separately. Among other benefits, the oil is very anti-microbial, anti-viral and anti-fungal.
- Studies reveal that dried, powdered Thyme is very beneficial to the gut microbiome:
  - November 2022, no. 11, Food and Nutrition Sciences, 'Effects of a Food Supplement with a Wild Thyme (Thymus serpyllum L.) Extract on Gut Health and the Microbiome in Humans: A Randomized, Double-Blinded, Placebo-Controlled Clinical Trial' (German study): *"The study results indicate that WThE [Wild Thyme Extract] has the potential to improve gastrointestinal symptoms and increase stool frequency... A [positive] decrease in the mean Firmicutes/Bacteroidetes ratio was seen in WThE group."*
  - Dec. 4, 2023, Nutrients journal, 'Thyme Extract Alleviates High-Fat Diet-Induced Obesity and Gut Dysfunction' (Chinese study): *"We explored the potential of thyme extract (TLE) to mitigate HFD [High Fat Diet]-induced metabolic derangements and improve the gut environment. Eight-week-old C57BL/6 mice were administered 50 or 100 mg/kg TLE [Thyme extract] for eight weeks. Administration of 100 mg/kg TLE resulted in decreased weight gain and body fat percentage, alongside the regulation of serum biomarkers linked to obesity induced by a HFD. [More benefits listed.] These results suggest a promising*

role for thyme in ameliorating obesity and related gut conditions associated with a HFD."

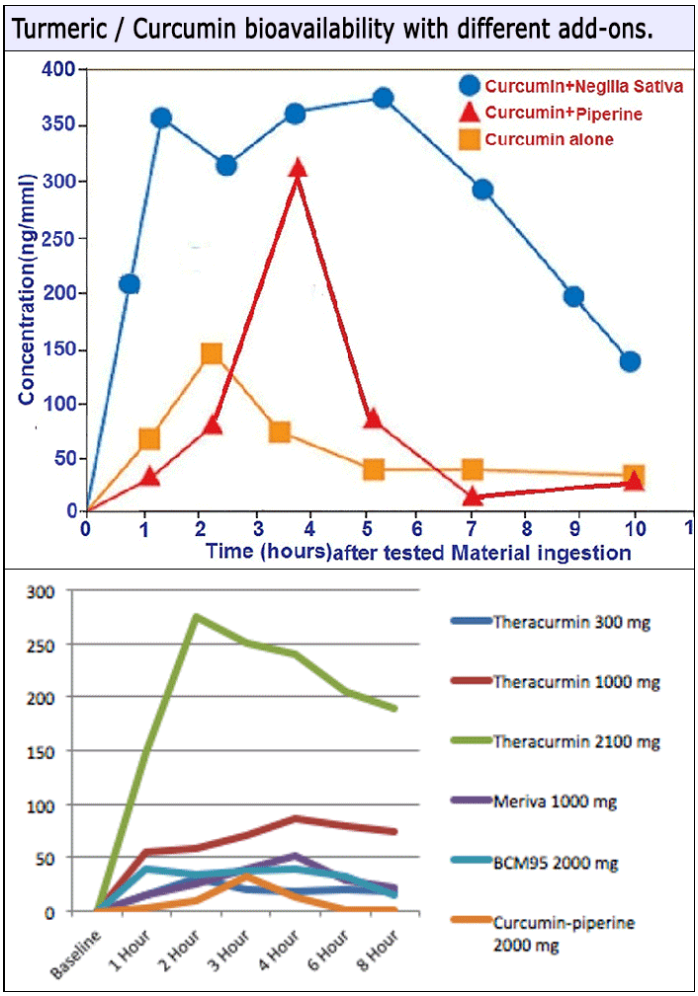
- Chewing on a quarter teaspoon, smelling it, steaming an extract and inhaling it from there, or putting thyme in tea, can loosen up mucus in your sinuses (similar to NAC) and even reduce bronchitis symptoms. Various studies demonstrate a positive effect here.
- User experiences related to thyme opening up the airways:
  - **This author:** I have definitely noticed again and again that a combination of a few grams of thyme and oregano sprinkled on raw nuts, causes a few bouts of sneezing and a major loosening of mucous. It partly runs down my throat in a different way than NAC, which fully liquifies mucous. This also happens with thyme and-or oregano, but part of the mucous tends to remain more clumpy as you feel it coming lose. You tend to swallow a few more of those clumps. Thyme-oregano may also predominantly target slightly different areas of the sinuses than NAC: higher up in and behind the nose, which may also explain the sneeing that I have never had with NAC. In general, it seems to boost the strength of NAC by itself, even large 5-10 gram doses of NAC.
  - **YouTube comment:** *"This absolutely works. I had Covid two weeks ago, and I had a terrible cough. I saw another doctor on Facebook talking about using thyme. I was already making tea with turmeric ginger and green tea. I went to the market and bought some organic ground thyme and added a spoon to my already made tea. I stopped coughing that same day. now I make this tea in bulk and keep it in my fridge. I drink it every day."*
  - **YouTube comment:** *"Had a terrible sinus headache and stuffiness. Antibiotics not working. Had nothing to lose. First, [chewing on] 1/4 tsp of the thyme: headache disappeared! Did this every 6 hours and by the 3rd "dose" was not stuffy anymore. I'm sold on it!"*
  - **YouTube comment:** *"I had a nagging cough for almost 2 months. Some days worse than others. I saw this yesterday and chewed the thyme today and had minimal cough. This really worked."*
  - **YouTube comment:** *"I am going thru the worse phase of dry, congested nose with copious phlegm that just wears me out. I immediately went to the store and got the organic thyme. Tried chewing it but [tastes] not good. So made 3 cups of the tea which I will be consuming throughout the day. BUT even the short time I had the dry thyme in my mouth sucking out the juices, i immediately noticed a difference in my breathing and ridding of stuck phlegm."*

- **YouTube comment:** *"I've tried [the thyme chewing] twice recently and it works very well!"*
- **YouTube comment:** *"ENT doc here: When it comes to blocked sinuses, an inhalation of black seed oil, combined with camomile does wonders. This inhalation is not fit for the bronchial airways for most patients as it irritates the airways too much, but for a sinusitis it does wonders."*
- **YouTube comment:** *"I could swear I once used organic fresh thyme to fight off bronchitis. I just chewed it, and made tea with honey. I'm a singer, and was pumped I didn't have to cancel a gig. I was absolutely amazed..."*
- **YouTube comment:** *"Amazing. For years I have had mucus in my throat to where I'm constantly trying to cough it out. It annoys me and I know it does everyone around me. I tried this and later in the day I realized I was no longer choking on a big gob of phlegm."*
- **YouTube comment:** *"I've been fighting a viral sinus infection since Christmas and so I took this just before bed and about every 5 hours when I woke up. Sinuses were so clear throughout the night that I could breath through my nose. I suffer from consistent congestion due to candida issues and this may become a game-changer."*

Turmeric

- Curcumin is the most important active ingredient of Turmeric root, a cousin of Ginger. In nature, only between 1 and 7% of the Turmeric root consists of Curcumin, the average being around 3%. This is the reason that Turmeric root extract or almost pure Curcumin is sold as well, because it is a lot more potent.
- Used a ton in the Indian kitchen as a spice, and generally with cooked foods and with warm milk, generally only a few teaspoons of Turmeric at a time are used for a meal feeding several people:
  - **YouTube comment:** *"As an Indian, we eat lots of turmeric everday, its practically added in almost all of our foods."*
  - **YouTube comment:** *"It's considered the best medicine in India for ages till now we all take turmeric with warm milk before we go to sleep. As an Indian I confirm that this do work."*
- Normally Curcumin is barely absorbed by the intestines, and therefore very little of it ends up in the blood. However, by adding a little bit of piperine extract, to be found in black pepper at a rate of around 9%, a reported 20x more Curcumin is absorbed into the bloodstream. Studies vary on the exact amount, as well as the half-life of Curcumin-piperine, but generally it is fully gone from the

blood in 7 hours. Newer formulas for increased bioavailability include Phytolistic Curcuma (a reported 40x), Nigella Sativa (a much longer Curcumin spike and slightly higher blood numbers than with piperine), BCM-95 (bonded to an oil similarly harvested from Turmeric root, and roughly comparable to Black Seed Oil), Theracurmin (200x or so versus piperine's 20x) and Theracurmin Super.



- **YouTube comment:** *"There are now formulations that are more powerful. Curcumin formulation with nano-micelles containing Gelucire and polysorbate 20 (BioCurc) have the highest bioavailability in studies >400X unformulated curcumin. ... Omax HydroCurc Turmeric Curcumin Softgels on Amazon uses BioCurc now known as HydroCurc but you can use other brands too like the Life Extension brand etc."*
- **YouTube comment:** *"There are apparently better ways than pepperine (x20 bioavailability) such as miceller (x185 bioavailability) to deliver curcumin."*
- Sep. 2022, Molecular Nutrition & Food Research journal, 'Micellar Curcumin: Pharmacokinetics and Effects on Inflammation Markers and PCSK-9 Concentrations in Healthy Subjects in a Double-Blind, Randomized, Active-Controlled,

Crossover Trial': *"In this double-blind, randomized, crossover trial, 15 healthy volunteers receive micellar or native curcumin (105 mg day-1) for 7 days with a ≥7 days washout period. ... Micellar curcumin demonstrates improved bioavailability (≈39-fold higher maximum concentrations, ≈14-fold higher area-under-the-time-concentration curve, p < 0.001) but does not reduce pro-inflammatory cytokines in the chosen model. Subjects receiving micellar curcumin have significantly lower PCSK9 concentrations (≈10% reduction) after 7 days compared to baseline (p = 0.038)."*

- YouTube comment: *"curcumin + piperine is basically way old first gen delivery technique. We've moved into cyclodextrin bundling, lipids, micellar versions, etc. All have significantly better absorption than that first gen methodology."*
- YouTube comment: *"As piperine also increases bioavailability of EGCG in green tea extracts, does the combination potentially increase the risk of liver toxicity?"*
- March 28, 2023, ACS Omega journal, 'Curcumin Formulations for Better Bioavailability: What We Learned from Clinical Trials Thus Far?': *"First generation formulation: - Curcumin Piperine. ... Second generation formulation: - Meriva. Nano-curcumin. - Theracurcumin. HydroCurc. - LipoCurc. ... Third generation formulation: ... - Longvida. - CurQfen. - Curcuwin Ultra+."*
- April 15, 2010, Food Chemistry, 'Curcumin inhibits influenza virus infection and haemagglutination activity' (result: roughly a 30% to sometimes a 50% reduction in sick days, with Theracurmin Super winning over Theracurmin (regular)).

- As Turmeric is fat-soluble, take it with at least 15 grams of fats. 8 grams of Turmeric or Curcumin n a day generally is considered the safe daily max.
- There's been a long-standing question whether or not Turmeric needs to be heated up for maximum benefit. This does not appear to be the case, looking at positive user experiences using Turmeric supplements. However, even heating up Turmeric to 180 degrees Celsius for 10 minutes or so, seems to keep around 80% if its beneficial effects in relation to Curcumin. In fact, it has been stated that various other compounds in Turmeric actually are enhanced when heated. There is talk that if the spice is heated, it becomes up to 12x more bioavailable. All in all, there still are a lot of unknowns when it comes to heating the spice.
  - Jan. 20, 2022, Indian Times, 'Does heating and boiling destroy the health benefits of turmeric?': *"The effects of Curcumin become more effective and a majority of the research conducted on the effects of heat on Curcumin speaks in favour of cooking the spice. Cooking turmeric generally improves the*

concentration of Curcuminoids by the body and also increases the antioxidant capability in the body," says S.N. Rao, Managing Director, Supreem Super Foods."

- Positive user experiences with Turmeric / Curcumin supplements - overlapping with studies - mainly involve:
  - prevention and reduction of sick days and symptoms;
  - reduction of chronic inflammation pain, anywhere in the body;
  - reduction of arthritis pain;
  - normalizing of blood values;
  - improving and curing of intestinal problems;
  - improving and curing anxiety, despression, migraines and brain fog;
  - reducing allergies and asthma;
  - and preventing and fighting cancer.
- Various studies also show Turmeric / Curcumin's ability to fight cancer:
  - Aug. 24, 2020, BMC Cancer, 'Clinical effects of curcumin in enhancing cancer therapy: A systematic review': *"The anti-cancer effects of curcumin include inhibiting the carcinogenesis, inhibiting angiogenesis, and inhibiting tumour growth. ... The results are derived based on several clinical studies on curcumin consumption with chemotherapy drugs, highlighting that curcumin increases the effectiveness of chemotherapy and radiotherapy which results in improving patient's survival time, and increasing the expression of anti-metastatic proteins along with reducing their side effects."*
  - April 5, 2024 version, cancer.gov (National Cancer Institute), 'Curcumin (Curcuma, Turmeric) and Cancer (PDQ®)–Health Professional Version': *"- Extensive research over the past two decades suggests that curcuminoids, the active ingredient in turmeric (C. longa), interfere with multiple cell signaling pathways, providing support for the potential role of curcumin in modulating cancer development and progression.*
    - With varying formulations and doses tested in phase I clinical trials, there is evidence of bioavailability of curcumin and curcumin conjugates in plasma, urine, and tissue.
    - Results from early-phase trials of curcumin-containing products in the chemoprevention of colon, oral, and hepatic carcinoma appear promising."
- Various studies showing Turmeric / Curcumin's ability to fight Flu viruses and Covid:
  - April 15, 2010, Food Chemistry, 'Curcumin inhibits influenza virus infection and haemagglutination activity' (result: roughly a 30% to sometimes a 50% reduction in sick days, with Theracurmin Super winning over Theracurmin (regular)): *"Our*

results demonstrated that treatment with 30 μM curcumin reduced the yield of virus by over 90% in cell culture."

- "This study aimed to investigate the effects of 12-week consumption of highly bioavailable curcumin (150 mg/day of Theracurmin Super [TS-P1] or Theracurmin [CR-033P]) on common cold symptoms [involving] 99 healthy Japanese adults... Each subject was randomly assigned to one of the following three groups: TS-P1, CR-033P, or placebo (n = 33 per group). ... No adverse effects were observed. Consumption of highly bioavailable curcumin, TS-P1 or CR-033P (150 mg/day), for 12 weeks reduced the number of days for which common cold symptoms persisted in healthy Japanese adults. ...
  Table 3: Cumulative and maximum persisted days for which, and frequency with which common cold symptoms... Cumulative number of expression days: [TS-P1 Group:] 38.6 ... [CR-033P Group:] 39.4 ... [Placebo Group:] 56.8. **[respectively 47% and 44% more sick days]**... Maximum number of expression days: ... [TS-P1 Group:] 22.3 ... [CR-033P Group:] 27.8 ... [Placebo Group:] 45.2 **[respectively 103% and 63% more sick days]** ... Frequency of expression during the intervention period (%): [TS-P1 Group:] 45.7 ... [CR-033P Group:] 46.7 ... [Placebo Group:] 67.0 **[46% more sick days]**..."
- Jan. 23, 2024, Virology Journal, 'A novel film spray containing curcumin inhibits SARS-CoV-2 and influenza virus infection and enhances mucosal immunity'.
- June 12, 2020, Frontiers in Cell and Developmental Biology, 'The Inhibitory Effect of Curcumin on Virus-Induced Cytokine Storm and Its Potential Use in the Associated Severe Pneumonia': *"Many studies have documented that curcumin disrupts the viral infection process via multiple mechanisms, including directly targeting viral proteins, inhibiting particle production and gene expression, and blocking the virus entry, replication, and budding (Wen et al., 2007; Basu et al., 2013; Ou et al., 2013; Du et al., 2017; Kannan and Kolandaivel, 2017; Yang et al., 2017; Dai et al., 2018; Praditya et al., 2019). A recently in vitro study has demonstrated that curcumin inhibits respiratory syndrome virus (RSV) by blocking attachment to host cells (Yang et al., 2017). In this study, curcumin was also found to prevent the replication of RSV in human nasal epithelial cells. Additional evidence suggests that curcumin inhibits Porcine reproductive and RSV (PRRSV) attachment, possibly by disrupting the fluidity of viral envelopes (Du et al., 2017). Curcumin also obstructs virus infection by inhibiting PRRSV-mediated cell fusion, virus internalization, and uncoating (Du et al., 2017).*
  For a century, different subtypes of IAV, H1N1, H2N2, H3N2, and

H5N1 have been the leading cause of pandemic outbreaks in the world. It has been reported that curcumin and its derivatives have a high binding affinity to hemagglutinin (HA), a major capsid glycoprotein of influenza virus that mediates virus attachment (Kannan and Kolandaivel, 2017). Ou et al. (2013) have demonstrated that curcumin interacts with HA and disturbs the integrity of membrane structure to block virus binding to host cells and prevent IAV entry. In another study with cells infected by IAV, it was found that curcumin directly inactivates various strains of IAV, disturbs their adsorption, and inhibits their replication (Dai et al., 2018). ...

Numerous in vivo and in vitro studies have been shown that curcumin and its analogs markedly inhibit the production and release of pro-inflammatory cytokines... In line with this, Zhang et al. (2019) have observed that direct pulmonary delivery of solubilized curcumin dramatically diminishes pro-inflammatory cytokines... In addition, curcumin also decreases expression of many other inflammatory mediators...

Cytokine storm syndrome triggered by viral infections is the culprit of death. It is exacerbated by unchecked regulation of the production of pro-inflammatory cytokines and ROS, leading to pneumonia, ALI, multiple organs failures, and eventually death. No effective therapy is available for the cytokine storm syndrome and associated lung and other organ failures. Curcumin is a natural plant extract with high safety and low toxicity such that people take it as a diet supplement, and growing evidence from preclinical studies demonstrates that it effectively inhibits viral infection, alleviates the severity of lung injury through offsetting the cytokine storm, inhibits subsequent fibrosis, and increases survival rates (Figure 3). ...

Funding: This study was supported by the National Natural Science Foundation of China (Nos. 81560299 and 81660163), and Innovation and Entrepreneurship grant from Jiangxi Province Bureau of Foreign Experts."

- Turmeric seems to protect from heavy metal damaging:
  - July 2014, Food and Chemical Toxicology journal, 'Protective effect of curcumin against heavy metals-induced liver damage'.

Positive user experiences related chronic inflammation pain in the body, whether this is temporary due to a surgery, or more chronic, including from arthritis (there are way to many positive experiences to list here):

- YouTube comment: *"I've been using turmeric for a few months now and have noticed incredible results from using it, mainly how my inflammation has diminished to nearly nothing anymore, my focus is better and many other smaller details that make quality of life for me a lot better."*

- **YouTube comment:** *"One of my African friends that knows a lot about this stuff said to mix with black pepper which opens it up. Even if I feel pain if I put in a SPOON, BLACK PEPPER ON TOP THEN OLIVE OIL & take that spoonful the pain or inflammation is GONE within 5 minutes."*
- **YouTube comment:** *"My doctor actually recommended that I take this supplement for joint pain. I've been taking it for several months and it has helped tremendously."*
- **YouTube comment:** *"CuraMed is specifically for inflammation, and CuraMed is for pain. Both contain curcumin but in different amounts. I never used Tylenol, etc, and use CuraMin instead for headaches, cramps, etc., and CuraMed for inflammation issues."*
- **YouTube comment:** *"I have been taking a turmeric supplement for a few years now everyday (except if I run out) . It has helped tremendously with inflammation and edema in my lower legs and feet..."*
- **YouTube comment:** *"Good ole arthritis is my constant companion, inflammation really bad in my body along with fibromyalgia. I started doing the turmeric chews, quite good but not helping at all. I've taken then for awhile, a chew morning and evening. So that means I need to switch to that [more pure Curcumin] Cura-med?"*
- **YouTube comment:** *"I've been taking it for arthritic knees and I definitely notice a difference when I stopped briefly"*
- **YouTube comment:** *"My specialist hair dermatologist had me use it for the inflammation on my scalp caused by my auto immune disease. Result: no more inflammation. I started my husband on it for his chronic knee pain. Two weeks later he was pain free and has been pain free ever since."*
- **YouTube comment:** *"I had severe all over joint pain since having my daughter. I'm talking in my knees, hips, lower back, everything hurt. I tried lots of things. I tried a cocktail of turmeric [with cayenne powder, apple cider vinegar, and honey]. ... I also take two pills at night. I have hardly any joint pain now, I'm able to workout now! When I stop taking it after a few days, I feel the joint aches again. I'm only 34 and relatively healthy."*
- **YouTube comment:** *"I have been taking turmeric with black pepper capsules for nearly two years. The reason I started to take it was because of my arthritis in my hands, knees and lower back pain. I am a 52 year old carer and I was in a lot of pain with my back and hands... I was taking 2 ibruprofen every day for a good few years which helped my back pain but did nothing for the arthritis. But i knew it was not good for me so I*

thought I would try turmeric instead. It took about 5/6 months before I started to notice the difference, I was so amazed. And now my hands and back feel sooo much better. I recommend it too lots of people."

- **YouTube comment:** *"I have travelling joint pain from the AI I'm taking - turmeric (with pepper) has helped immensely. Takes about a month to start to kick in."*
- **YouTube comment:** *"I give curcumin to my 15 year old dog. He had a green fracture when he was a puppy and he developed arthritis in his leg. With the curcumin, he runs around pain-free. It's wonderful! The one time I ran out of curcumin and he was off it for a week, he started limping again."*
- **YouTube comment:** *"I have long used curcumin for my hands after bouldering. They'd get sore for a few days sometimes but curcumin resolves it. Was very noticeable."*
- **YouTube comment:** *"Tumeric has reduced CRP inflammation marker ! It reduces my muscle aches. The best form is Longvida Tumeric which is costly a bit, but best absorbed, it's without pepper."*

- Positive user experiences with Turmeric / Curcumin supplements with regard to allergies and asthma:
  - **YouTube comment:** *"My allergic rhinitis virtually disappeared ever since I took turmeric supplements. I've been dealing with allergies for about a decade now, so this is amazing."*
  - **YouTube comment:** *"Curcumin is amazing. Not only did it help my arthritis and joint pain but it has helped me not to react so badly to all the pollen in the air (I have asthma and pollen allergies)."*
  - **YouTube comment:** *"Totally agree, I use this for my arthritis pain and allergies, 100 % works."*
  - **YouTube comment:** *"I have been eating a teaspoon of tumeric powder every day since 2008. My asthma is gone, my allergies are gone, joint pain is gone."*

    YouTube comment: *"Turmeric with black pepper changed my life! No asthma, no allergies, no stomach issues."*
- Positive user experiences with Turmeric / Curcumin regarding intestinal health:
  - **Reddit comment:** *"I had Candida, SIBO and parasites for years about 5 years, I tried everything spend thousands seeing every specialist all told me bullshit, about cut this food diet all this bullshit. In the end I got better within 2 weeks using Neem & Turmeric Balls twice a day at morning & night killed every parasite killed all candida. Try it and thank me later. Have Fun."*
  - **Study:** *"One study indicated that the biomass of 38 strains of Candida was significantly reduced by curcumin (Khan et al., 2012)"*

- **YouTube comment:** *"I started on it over 20 years ago [when] I had erosions in my stomach and intestines, and it changed my life. I had to go on a soft food diet, antibiotics and antacids to kill the H. Pylori [bacteria], but the turmeric truly helped healing my gut, the pain and my stools went from diverticulitis to perfectly normal, and foods I couldn't eat without brutal pain I've eaten painlessly for 20 years now."*
- **YouTube comment:** *"Tumeric has basically cured my ulcerative colitis. My knee pain is gone also! It definitely works."*
- **YouTube comment:** *"I was diagnosed with Ulcerative Colitus3 years ago and prescribed (by a specialist) a drug to minimise the symptoms. My system couldn't tolerate the drug and it's side effects. I approached my G.P who suggested I try Tumeric tablets as where he was trained (South Africa) it is commonly used for all digestive problems and many other difficulties. I started on Tumeric tablets over 2 years ago and all my Ulcerative problems have vanished, along wth my Fibromyalgia symptoms. Strangely my skin has vastly improved also. I'm a 73 y.o. male. and cannot praise it enough."*
- **YouTube comment:** *"I have been drinking turmeric tea with black pepper for the past month now. The most immediate benefit so far has been with my digestion. My IBS is much more manageable now."*
- **YouTube comment:** *"Never knew all my problems would be solved by this one since I've had in my kitchen for months but I never use. I've had a recurring h pylori, prediabetic symptoms, stress intolerance."*

- Positive user experiences with Turmeric / Curcumin regarding blood values:
  - **YouTube comment:** *"In 2018, I started using Ginger, Tumeric and pepper In chamomile and mint Tea 3x's a day, honey and lemon. And it changed my blood levels so much my doctor asked what I did."*
- Positive user experiences with Turmeric / Curcumin regarding anxiety, despression, migraines and brain fog:
  - **Shea Whitney YouTube video:** *"Another thing that I specifically noticed over the last 30 days of me taking Curcumin or CuraMed [concentrated Curcumin], is a dramatic reduction in my anxiety. ... I became so much happier. I wasn't worrying about things. ... I wasn't thinking, "What's gonna happen in the future?"..."*
  - **YouTube comment:** *"I love turmeric, I take 1tsp/day (ground powder, organic, raw). Works for everything, especially brain fog/fatigue/anxiety. It seems to flush my gallbladder as well; it releases the pressure in that area."*

- **YouTube comment:** *"Been taking it for a few months (along with Magnesium) and I swear it's helped so much. Hugely helped in aiding several chronic injuries as well as depression."*

- Positive user experiences with Turmeric / Curcumin supplements with regard to cancer:
  - **YouTube comment:** *"My mom had breast cancer and the cancer broke through the skin. She put turmeric directly on the spot and it ate a chunk of the cancer over night. When the dr saw he called a bunch of other Dr's to show how much the cancer dissipated. She told them what she did and one of them told her that was a bunch of mumbo jumbo. She started to beat the cancer mentioning natural solutions introduced to her by my aunt. They then gave her medication that gave her a seizure and killed her."*
  - **YouTube comment:** *"You'd need to read the British Journal of Medicine, can't recall the year. It's about a case study of a woman with blood cancer who only used 8 gm of curcumin/ day and no other medication or cancer treatments, for about a year and half and became cancer free. Cuz of its ability to cause apoptosis. I've had the best outcome from Tumeric Meriva!"*
  - **YouTube comment:** *"40+ yrs. ago, I was diagnosed with Barrett's Disease. and told that I had a fair chance of developing stomach cancer in my later yrs. Also, some 25 yrs. ago, I had 2 types of skin cancer: Melanoma and Squamis Cell. and was told that I had a fair chance of developing Cancer. At that time, I started on Curcumin with Piperine. Now, at age 75, and in relatively good shape and told that I look some 10-15 yrs. younger than I am. My daily regimen of Turmeric will continue."*
  - **YouTube comment:** *"It helped me to fight cancer. My doctor was surprised that it lowered carcinogen levels and kept it in a frozen level."*
  - **YouTube comment:** *"I've been taking turmeric for years. I had three cancer scares last year - three biopsies. All benign. My dad, in his 70s at the time, took turmeric throughout his stage 4 liver and esophagus cancer. He's 83, still cancer free, still taking turmeric."*
- Positive user experiences with Turmeric / Curcumin supplements with regard to cancer:
  - **YouTube comment:** *"I found that turmeric with black pepper, in squeezed lemon and acv seemed to cure my urinary tract problems and prostate issues, along with low carb diet and exercise."*
- Negative or so-so experiences with Turmeric / Curcumin:
  - **YouTube comment:** *"When I take it, I develop symptoms of iron deficiency. Tested it many times with the same results. Most*

common symptom is dizziness when standing. When I remove turmeric from the equation, symptoms are gone. I've looked it up and sure enough there are studies on this. Love the stuff and wish I could take it but unfortunately my body doesn't agree. Worked great for my inflammation."

- **YouTube comment:** *"Added raw to juices and smoothies. Turmeric has heat properties, so they do give burning in urine in me personally. Does also gives me thrush if had more than half tspoon. As an Asian we eat in our curries everyday but only add quarter tspoon."*
- **YouTube comment:** *"I was diagnosed with spinal stenosis last year, which causes severe back and leg pain. I was looking for natural anti-inflammatory and curcumin leapt out at me. It has definitely helped, but I have since discovered several other supplements that provide similar benefits and much more... alpha-lipoic acid, acetyl-L-carnitine, N-acetyl cysteine [NAC]."*

- Curcumin can irritate the stomach by increasing stomach acid.
- To easily ingest several grams of turmeric without using "neem balls", similar to "turmeric balls" (this author prefers to call them "pills"), make this compound much easier to swallow. Neem:
  - Mix 1 (volume) part neem with .75 part water.
  - For turmeric, mix 1.5 part turmeric with 1 part water.
  - Stir and in about 10 seconds a clay-like substance starts to emerge.
  - The above ratios make sure the "clay" is relatively thick and dry, and therefore easy to roll into various shapes with your fingers.
  - Traditionally Indians rolled the neem and/or turmeric in balls, from which they broke pieces. This is possible, but you can also pre-make a whole bunch of pill-shaped neem and turmeric "balls".
  - Don't make them bigger than general supplement pills. You don't want them to get stuck into your throat, especially not when dried up and hard.
  - It seems the original recipe didn't account for curcumin only being fat soluble, and at the very least needing pepper to make it into the bloodstream. So eat these balls with a bit of fat and pepper, just to be sure.
- If you don't mix Turmeric through your food, or take them in supplement form, you can make traditional "Turmeric balls" (or, as the author likes to call them, "Turmeric pills"). The same goes for Neem, another tradional Indian herb taken in the same manner:
  - Mix 1 (volume) part Neem with .75 part water.
  - For Turmeric, mix 1.5 part Turmeric with 1 part water.

- Stir and in about 10 seconds a clay-like substance starts to emerge.
- The above ratios make sure the "clay" is relatively thick and dry, and therefore easy to roll into various shapes with your fingers.
- Traditionally Indians rolled the neem and/or Turmeric in balls, from which they broke pieces. This is possible, but you can also pre-make a whole bunch of pill-shaped Neem and Turmeric "balls".
- Don't make them bigger than general supplement pills. You don't want them to get stuck into your throat, especially not when dried up and hard.
- It seems the original recipe didn't account for curcumin only being fat soluble, and at the very least needing pepper to make it into the bloodstream. So eat these balls with a bit of fat and pepper, just to be sure.
- **YouTube comment:** *"Should the Turmeric Balls be made with Turmeric Paste instead of plain dry powder? I'm confused. Turmeric's beneficial Curcumin comes from heating the powder to release Curcumin. I make Turmeric Paste by mixing water and black pepper, bringing to a quick boil then simmering till it reduces to a paste. As it cools I add a bit of Ghee or Coconut Oil. Shouldn't Turmeric Balls be made from this paste instead of plain dry turmeric powder?"*

Vinegar

- The two types of vinegar are white vinegar, which is produced from alcohol and relatively cheap; and the more expensive, flavored apple cider vinegar.
- Both vinegars are strongly anti-microbial due to its 3-8% acetic acid. White vinegar is better for disinfection because it doesn't leave any stains. Regular white vinegar usually contains 3-4% acetic acid, while cleaning vinegar contains 7 or 8%. Both versions of white vinegar kill a wide variety of microbes.
- Machine washing with white vinegar to kill all bacteria:
  - 100ml of 3-4% white vinegar not only works as a fabric softener, it also kills all bacteria during the laundry process. This author has seen personal proof of that, because he quite regularly accidentally leaves damp socks and underwear in the washing machine or dryer. In the past he always would be greeted by a cloud of white mold growing on the left-over clothing, but since adding a tiny bit of vinegar, there's literally zero growth, even after finding damp clothes after a month.

    - In line with this: these days a lot of people wash their clothes at 40 degrees Celsius instead of 60 degrees. This is done to save time and energy, and also to lessen damage to clothing. However, a 40 degrees Celsius wash actually *"barely kills 14 percent of bacteria"* [59] compared to pre-wash levels, and continues to contain all the bacteria associated with poop and pee. This is why *"doctors"*, *"scientists"* and *"microbiologists"* recommend that you *"wash at 60 degrees to kill all the bacteria."* [60] The alternative is a disinfectant, of which a bit of vinegar if perfectly fine. It costs a few cents.
    - Machine washing with baking soda and white vinegar, instead of a laundry detergent, also works perfectly fine to clean your clothes. In fact, looking at the killed germs, it does a much better job. Do keep these substance separate though as much as possible as they occupy opposite ends of the pH spectrum. They react quite strongly when neutralizing each other. Misting the clothing with some vinegar, then using baking soda for the pre-wash and main wash, followed by white vinegar again for the anti-crease phase works perfectly fine.
- Removing odors from fabrics with white vinegar:
    - When you put basic 3-4% white vinegar into a mist sprayer bottle, it may be a decent anti-microbial cleaning tool in terms of clean surfaces, but where it really shines is in removing odors. If when you spray it on anything from stinky socks to stinky bedsheets, it will permanently remove the odor after it has dried because the odor is caused by bacteria.
    - In that sense, it is possibly to mist your stinky shoes with white vinegar. It will quickly kill all bacteria and odor. Then you can spray it again in your shoes and on your socks as you leave the house. The vinegar dampness will prevent the bacteria that cause the stinky smell from replicating, at least for one or more hours. If you have to do that regularly, it might be wise to also daily rub olive oil on your feet to prevent the skin from getting damaged or drying out.
- 3-4% vinegar is a very powerful and cheap replacement for very expensive medical eardrops that work slow, or often don't work at all because they are not powerful enough. It is not as strong as alcohol, but also considerably less aggressive. It is essential to press and massage the drops into very part of the ear, and to finish off with olive oil. If you don't use olive oil and for whatever reason you have to do a lot of vinegar dropping over multiple weeks, the skin will dry out and get damaged. At that point the only thing that restores the skin is oil coating, either olive or coconut.
- As for vinegar anti-microbial activity, it is effective against against just about all notorious bacteria: Candida, Staph (MRSA),

Helicobacter Pylori, Tuberculosis, etc.:

- May 25, 2014, Scientific World Journal, 'Effectiveness of Alternative Methods for Toothbrush Disinfection: An In Vitro Study': *"The toothbrushes were divided into 7 groups and were contaminated by standardized suspensions of Lactobacillus rhamnosus (L. rhamnosus), Streptococcus mutans (S. mutans), Staphylococcus aureus (S. aureus) [MRSA, i.e. Staph], and Escherichia coli (E. coli). The following disinfectants were tested: 1% sodium hypochlorite (NaOCl), 100% and 50% white vinegar, microwave (MW) oven, ultraviolet (UV) sanitizer, and mouth rinse-containing propolis (MCP). ... 100% white vinegar was the most effective method for S. mutans and S. aureus. NaOCl was the most effective for E. coli. Conclusion. This study showed that 100% white vinegar was considered to be effective for tested microorganisms. [In addition] Da Silva et al. reported that 100% white vinegar has good antimicrobial activity against C. [Candida] albicans and S. aureus for acrylic resins [21]. ... Komiyama et al. investigated the effectiveness of 50% white vinegar for toothbrush disinfection, and this solution was found to be effective for S. aureus, S. mutans, and Streptococcus pyogenes but not for C. albicans [9]."*
- March - April 2014, mBio journal of the American Society for Microbiology, 'Acetic Acid, the Active Component of Vinegar, Is an Effective Tuberculocidal Disinfectant': *"We found that acetic acid (vinegar) efficiently kills M. tuberculosis after 30 min of exposure to a 6% acetic acid solution. The activity is not due to pH alone, and propionic acid also appears to be bactericidal. M. bolletii and M. massiliense nontuberculous mycobacteria were more resistant, although a 30-min exposure to 10% acetic acid resulted in at least a 6-log10 reduction of viable bacteria. Acetic acid (vinegar) is an effective mycobactericidal disinfectant that should also be active against most other bacteria. These findings are consistent with and extend the results of studies performed in the early and mid-20th century on the disinfectant capacity of organic acids."*
- Feb. 2015, Cardiology Research, 'An Alternative Approach for the Rising Challenge of Hypertensive Illness via Helicobacter pylori Eradication': *"A colon clear by the natural senna leaves purge was employed for all patients as a primary step in order to eradicate the migrated colonic H. pylori strains [21]. All patients followed a natural remedy for gastric and colon care to complete eradication of abnormal behavior H. pylori strains; 20 cc of dietary white vinegar 5-6% mixed with a food staff (white cheese, mashed potato or yoghurt which is the best preferred food stuff for the vinegar to be mixed with), two times daily during meals for 7 - 10 days [21]. Confirmation of H. pylori*

eradication by urea breath test and H. pylori fecal antigen was done at end of natural therapy [20]. ...

All patients expressed dramatic relief concerning their dyspeptic symptoms and constipation was relieved in all patients after 3 - 5 days of treatment. All patients were confirmed negative for H. pylori after the natural therapy.

Fifty-seven patients (57.6%) were able to quit their medications and maintain normal BP values after the vinegar therapy. Thirty-three patients (33.3%) needed an additional 1 week of therapy with vinegar in order to resume a normal BP and quit medication. Six patients (6.06%) failed to get their BP lowered after therapy with both the vinegar and the purge; the three with overweight were not among them. Their failure to respond to therapy was attributed possibly to gaining new H. pylori strains due to misbehavior in food habits via outside-home meals. Three patients (3.03%) did not complete the study."

- Sep. 24, 2015, Special issue no. 1 (S1:1), General Medicine: Open Access journal (L.A.), 'A Comparative Study of Natural Eradication of Helicobacter pylori vs. Antibiotics' (**PDF**): *"The literature confirms that recurrence of H. pylori is hardly avoidable; whether it is gastric recurrence from colonization of the bacterium in dental plaques or fecal-oral recurrence from the colon. The study included three groups of patients suffering from dyspepsia associated with H. pylori; each group size was 100 patients. ... The first group was treated with vinegar therapy alone for one week to 10 days. The second group was treated with the senna purge alone once or twice. The third group was treated with both the senna purge once followed by vinegar therapy for one week. ... The senna leaves extract purge was found to kill and expel rather completely the colonic H. pylori strains. Three times dilutions and extreme dilutions of dietary vinegar (acetic acid 6%) were found directly lethal to H. pylori if added to its culture media [11-14]. ...*

  The success rate of treatment in the first group was 91%, it was 95% in the second group and 97% in the third group; while the best success rate of the current antibiotic H. pylori eradication therapies as demonstrated in literature was maximally 83%. Natural measures of H. pylori eradication employing the senna purge and vinegar are superior in efficacy to the current antibiotic strategies. Eradication of abnormal H. pylori strains using natural measures is simple, safe, costless, effective and decisive; it is worthy to change attitude of medicine in dealing with the challenge known as H. pylori."

    - Dec. 2020, issue 2, Galen Medical Journal, 'Effect of Proton Pump Inhibitor Based Triple [antibiotic] Therapy with Apple Cider Vinegar on Helicobacter Pylori Eradication' (a study that largely misses the point): *"Results: 86% of patients in control group in comparison to 88% in apple cider vinegar group responded to eradication therapy (P=0.41). Conclusion: ... not statistically significant."*
- Apple cider vinegar generally has 5 or 6 times the polyphenols that white vinegar has. These are antioxidants which help support your good gut bacteria.

VEGETABLES

Artichoke

- Artichoke extract is used by small intestine bacterial overgrowth (SIBO) to (heavily) stimulate the peristaltic movements of the small intestine, often alleviating all SIBO symptoms, as the increased movement makes the small intestine uninhabitable for a wide variety of bad bacteria. It is often used in this case alongside ginger extract, which stimulates the stomach.
- Cynarine is one of the major active components of artichoke. Research has tied it to be liver protective [61] and having various other benefits.
- No further research yet.

Broccoli

- Broccoli is a great source of the anti-cancer and estrogen-lowering compound DIM, not just for the supplement industry, but also when buying it in the supermarket. At an estimated 20 mg per 100 gram, which only gets destroyed 20% during cooking it appears, a therapeutic dose of 75-100mg is within reach.
- Raw broccoli has a decent amount of "Vitamin U", which cures intestinal ulcers, and will do so very fast in combination with raw cabbage, and likely at least as fast with raw spinach.
- Broccoli is a concentrated source of sulforaphane, which helps fight H. Pylori by preventing it from being able to latch onto the stomach lining.

Cabbage

- Cabbage juice has been shown to heal intestinal ulcers quicker than any other vegetable, with the possible exception of spinach. For details see vitamin U.

Celery

- Celery juice is sometimes used to kill candida. It may actually kill it. But apparently it doesn't fully kill Streptococcus bacteria.
- Experiences:
  - **Reddit comment:** *"Celery juice has literally given me back my life. I struggled with debilitating bad breath to the point that I wouldn't feel comfortable leaving my house. I now have a boyfriend and feel comfortable socializing. But if I stop drinking it for a couple of days, the smell returns. So there definitely is something in the celery juice that is effective. Just can't say what it is or why it helps. I had tried about 100 other things over the course of 12 years to treat it any the only thing that provides temporary relief is this, and antibiotics. ...*
    It has to be ingested. The beneficial results are directly correlated to how much I drink. I've tried only having a cup or two per day - spread out over hours but the results aren't as good. ... I know the bad breath is related to bacteria though since it went away while on a course of flagyl - but it returned right after."
  - **Reddit comment:** *"Yes I take it with cabbage juice or on its own for h pylori. It kills that bacteria and treats gastritis. But you have to juice it consistently for three months to get rid of it. It's a tonic that cleanses stomach and colon with liver and gallbladder."*
  - **Reddit comment:** *"I had Candida, SIBO and parasites for years about 5 years, I tried everything spend thousands seeing every specialist all told me bullshit, about cut this food diet all this bullshit. In the end I got better within 2 weeks using Neem & Turmeric Balls twice a day at morning & night killed every parasite killed all candida. Try it and thank me later Have Fun."*
  - **Reddit comment:** *"I wish, I can't rid of candida, I've been doing the celery juice for well over a year. Not because of candida. That fun began a few months ago. Celery juice helps me in many ways but not for that unfortunately."*

Kale

- In combination with cabbage, very potent in curing gastric ulcers, which can lead to gastric cancer. For details see vitamin U.

Spinach

- In combination with cabbage, very potent in curing gastric ulcers, which can lead to gastric cancer. Spinach seems more effective than kale, and even cabbage in this regard. For details see vitamin U.

MORE

ALA

- Full name: Alpha-Lipoic Acid. For supplementation you need R-Alpha Lipoic Acid (R-ALA), because it is a natural compound. S-ALA is synthetic, and has much poorer absorbtion. SR-ALA is a mix of synthetic and natural. Both aren't as effective as natural.
- R-Fraction Alpha Lipoic Acid reportedly is the most bioavailable version, with some reporting it does not give them headaches or any stomach upset compared to regular R-Alpha Lipoic Acid. It's hard to say at the moment if that is good or not, as so little is known about R-Fraction.
- ALA is one of the earlier alternative methods to detox heavy metals from the body. It has a brief half-life though, so you have to take it every few hours to prevent the heavy metals it has grabbed from depositing them somewhere else in the body, leading to potentially even worse health problems. It also takes many months and years to detox on ALA, so anything from garlic to zeolite might be a better first try.
- Comments regarding ALA detoxing heavy metals:
  - **Reddit comment:** *"No, I do not believe that one injection of ALA would cause permanent damage. What I do believe you experienced was redistribution symptoms of moving A LOT of mercury around your body at one time. ALA is one of the few chelators that bonds to mercury with a double bond, hence its ability to grab and remove mercury. But what happens is single doses causes the mercury to be gathered, and then as the half-life of the ALA degrades, the bond weakens and the mercury is eventually released before your body has a chance to dispose of it. That's why Dr. Cutler was an advocate of small doses (20mg every 3 hours for 3 days [4 hours apart at night]) to keep your body saturated with chelators that weren't degraded and were capable of binding to the mercury through the entire process of disposal. It's worth looking into! Good luck!"*

- **Reddit comment:** *"It's okay, ALA needs to be taken around the clock for heavy metal chelation and needs to be taken for years. ALA was made popular by a certain health practitioner or Dr [Cutler] years ago, but it's not that great for heavy metals bc it takes time and needs to be taken so often. Baths are more effective and easier on the body. Sodium thiosulfate and micronized pure zeolite baths will help detoxify heavy metals much faster and not risk retoxification. Omega 3 is decent, but won't do much for chelation."*
- **Reddit comment (2012):** *"I am currently chelating with ALA without doctor supervision. I use it in conjunction with DMSA which seems to minimize the side effects. I have found frequent low dosing (Cutler protocol) to be the most effective with minimal side effects. Chelators bind to the metals and then must be excreted by your body. If your excretory systems can't keep up, the metals are reabsorbed and you feel awful. After much experimentation, I have figured out a support program that makes the process infinitely more bearable. The basics: Vitamin C - very large doses, as much as your bowels will tolerate, liposomal is best Vitamin E - 1000 IU - in divided doses throughout day B Vitamins - B50 taken three times per day Minerals are very important but the particular ones needed are variable. Most metal toxic people do well with zinc, magnesium, chromium, and molybdenum is great for mercury issues. Cod liver oil -1g -3g per day. Energy issues: Tyrosine - I take two doses per day @ 1g each Acetyl-L-Carnitine - 1000mg per day Chelating is tough on adrenals. Adrenal cortex extract has been a godsend along with Siberian ginseng and rodiola rosea. Chelating sometimes creates digestive issues which I treat with digestive enzymes, betaine, and probiotics. The liver can become taxed so milk thistle and desiccated liver are very supportive. Chelating is a long, slow process. Don't rush it and ask for help when you need it. Check out the frequent dose chelation board on yahoo for info and feel free to PM me."*
- **Reddit comment:** *"Alpha Lipoic Acid - Amazing Improvement a Month Plus Ongoing. Nothing else worked. Why?"*

- Considered important in rebuilding damaged nerves with people who have neuropathy, with vitamin B12 in particular possibly being a useful addition:
  - **YouTube comment:** *"I started on R-ALA 300 mg. One time per day, I started a month ago. After 10 years of brutal pain, my pain level has almost disappeared."*
  - **YouTube comment:** *"I have neuropathy and burning at least 50% of my body I had tried Alpha liopic acid of and on and on for at least a year and felt nothing until I discovered it has to be*

R alpha lipoic acid and it absolutely helps. I just discovered Benfotamine. I just started it and read takes a week or two to feel effect it is a pre curse of B1."

- **YouTube comment:** *"I'm an IED sharpnel survivor, and if this compound helped me and is relieving me of pain... After starting R-ALA I started sensing a HORRIBLE odor in my urine. Two days later I got spasms in my back that prevented me from walking normally. I pushed through and feel that as a chelator, the lipoic acid pulled something out of my kidneys, hence the horrible spasms. A few weeks later I realized I was loosing fat in my mid section, no more kidney spasms, and I could stand tall and not hunched over. When exercising my muscles feel fuller whereas I just felt myself damaging my muscles when I "worked out". My skin looks simply awesome too."*
- **YouTube comment:** *"I had nerve itching and tingling in my feet...went to school on it, online, and learned about ALA...totally solved the problem. It was miserable at the time...interfered with sleeping, packed my feet with ice bags to get some relief till I discovered the ALA. Now, at the first sign of even the slightest symptom...I take 600mg. Works completely."*
- **YouTube comment:** *"I began taking R-Alpha-lipoic acid as a supplement in 2013. My peripheral neuropathy was in my entire body. When I began taking it I had two toes on each foot that I could wiggle. Now all my toes are working fine. It took five months of taking it on faith before I began to see major improvements. I will continue to take it until I die."*
- **YouTube comment:** *"I have Peripheral Neuropathy and have been taking ALA for 2 months and the pain and tingling are gone and I am improving everyday."*
- **YouTube comment:** *"I am a pre-diabetic who suffered from peripheral neuropathy. I saw this. I took your advice and started ALA. After the FIRST pill, the pain disappeared. And hasn't come back! Now I take 600mg ALA every day."*
- **YouTube comment:** *"I was admitted to hospital for nerve pains. I was given gabbapentin. It did not work. I then take ALA for a month and now i can walk again. ALA really works."*
- **YouTube comment:** *"I was taking [ALA] for my skin and I started feeling less pain. ... I have suffered with pain head to toe since I was in my twenties & I wish I had known this then. I'm now 72 & for the first time ever I don't hurt."*
- **YouTube comment:** *"I recently came across Alpha-Lipoic Acid. After 3 weeks I was able to sleep without pain in my feet. Because of it, I also notice the tension spasm in my head have disappeared."*
- **YouTube comment:** *"I started to have numbness, tingling, and horrible itching in my thumb, which then started spread to the*

rest of my palm. I've been taking ALA for a few months, and it's completely gone away."

- **YouTube comment:** *"I was suffering severe neuropathy burning sensation in my both the foot, now am very happy. ... 92 days I took 300mg Vitamin B1 Benfotiamine, and 600 mg Alpha lipoic acid. My severe neuropathy [is] gone."*
- **YouTube comment:** *"Have been taking ALA combined with B6 and B12 for 3 months now. Wow! The difference is very noticeable and quite astounding."*
- **YouTube comment:** *"My Neuropathy was getting worse and worse, and driving me crazy. I started taking this and other things he suggests, and now it is almost gone."*
- **YouTube comment:** *"I had peripheral neuropathy as a consequence of a cocktail between high level of stress, leaky gut and nutrition imbalance and deficiencies. I got full remission through eating bone broth, carnivore diet and l-glutamine, vitamin D3 , zinc, omega 3 supplements. Plus, I eliminated all kind of grains, flour, dairies, nightshades, sugar, etc."*
- **YouTube comment:** *"Developed neuropathy in my feet-started taking ALA, BEFOTAMINE AND VIT e. Ppain goes away within the hour. Also noticed if I eat red meat with grains (fajitas in tortilla) and peppers, not only does it flare up - but my knees ache, nightshades like peppers added to the above foods aggravate arthritis in people susceptible to nightshades-add magnesium!"*
- **YouTube comment:** *"Omg I've been a diabetic for 23+ years with neuropathy for at least 7 years. This is the first time I've ever heard of this. Medical professionals are FOS. They push pharmaceutical products that they know doesn't work. Shame on them."*
- **YouTube comment:** *"Believe or not, I started taking this and over night my foot and leg neuropathy pain of 20 years vanished..amazing stuff. Better to take it with food."*
- **YouTube comment:** *"Oh my goodness this stuff actually works!!! Finally I can get to sleep at night."*
- **YouTube comment:** *"So I purchased Alpha lipoic Acid 2 weeks ago and started taking it immediately. My neuropathy has miraculously stopped after about 2 weeks of taking it."*
- **YouTube comment:** *"I have had issues with peripheral neuropathy recently. I ordered the ALA above. When it arrived I immediately took one. The next day I was able to tell a marked improvement! It has now been 4 days. I feel so much better. My hands and feet do not ache and tingle. I can sleep at night without the blanket causing my toe tips to hurt. I can type*

without the dull ache that gets worse the more I do it. This stuff works! I was thinking weeks before I saw anything."

- Can improve diabetes and diabetic neuropathy:
  - **YouTube comment:** *"Update. I now take alpha lipoic acid once daily and after a month my glucose sugar levels dropped to normal range and some of the pains I used to have left me."*
- Can improve cholesterol and heart disease-related complaints:
  - **YouTube comment:** *"I started taking ALA for neuropathy due to nerve damage originated in my spine. I have been taking it almost a year, have had no side effects, but haven't really had any change to the neuropathy. However, an unexpected benefit is that it has lowered my cholesterol... I am 65 but at age 27 my cholesterol was slightly over 200 but I was in a low risk factor, probably from my active lifestyle. As my cholesterol climbed over the years I have been on various statins but my cholesterol stayed 260-280 but my risk factor was climbing and my A1C started rising to 5.7. ... My cholesterol was 160 five months ago and it has NEVER been below 200. Three months ago another specialist tested my lipid panel and my cholesterol is 143. My cardiologist says I can back off to yearly visits, my A1C is dropping and now 5.3. I am not diabetic. My PCP is amazed and is going to do more research as he is a huge believer of preventive medicine. If my labs remain, he is going to stop the statin on a trial basis, but after 30+ years of statins that never changed my labs, I attribute the improvement to the ALA. Mine might be an isolated case, but it is easy enough to try and reasonably priced, $20/240 capsules which is an 8 month supply. While my neuropathy hasn't changed, the reduction of my A1C and lipid profile is worth taking."*

Aloe vera

- Aloe Vera is roughly as good as convential 1% silver sulfadiazine cream used to treat burn wounds, and possibly slightly better, also in pain management. Aloe Vera also is very good at keeping pathogenic bacteria down in burn wounds and ulcers.
- The easiest way to treat burn wounds or sunburn is have a live aloe vera plant around and crush one of the leaves into pulp to apply to the burn. With commercial aloe vera you have to keep purity and expiration date in mind.
- If you're allergic to garlic, you likely also are to aloe vera. Aloe vera also contains latex, which some people are allergic to. It is the yellow, bitter sap found just under the green rind of the aloe vera leaf.
- Experiences:

- **Reddit comment:** *"I keep aloe plants and can attest that this does work. Use it on my wife's sunburns all the time. Side note I wish she'd wear sunscreen..."*
- **Reddit comment:** *"It's a miracle plant. You know when you go to take a fry pan out of the oven and forget the handle is hell hot and it appears to melt your skin on the palm of your hand where you gripped it? Completely healed the next day! Sure cool water and cold packs as well but incredible!"*
- **Reddit comment:** *"I grow aloe vera and comfrey for burns. It got put to the test a few months ago when an elderly ... friend/neighbour [had] managed to knock the frying pan off the stove and tipped boiling fat all down his leg. He point blank refused medical treatment but I smothered the burn with gel from an aloe vera leaf, trotted down to the pharmacy to stock up on creams and bandages and dressings, wrapped the whole thing up with a layer of comfrey leaf next to the 'skin', changed the dressings twice daily, and argued endlessly about how he should really get it checked out by the hospital but to no avail. After a couple of weeks of fussing like a mother hen over him it healed up beautifully with no scarring at all. The scabbed over area was about 4" by 6" and the pharmacist was insisting that hospital was the only place for him when she saw the photos, but he was absolutely determined not to go, though he did finally agree that if I could detect any sign of infection he would go, just to keep me happy, and I would take temperature readings twice daily."*
- **Reddit comment:** *"Yesterday, I suffered two separate minor burns during the span of one hour. The first was from my kitchen oven at the back of my hand. I accidentally touched it for less than a second at 180 degrees Celsius. I didn't pay any mind to that burn, because it didn't hurt and didn't functionally impair me.*
  Shortly after, I sat down to do some soldering. I accidentally burned my finger for 2 entire seconds on the tip of my iron at 350 degrees Celsius. On the spot of the burn, the skin of my finger had turned white and it hurt like hell.
  I immediately applied a generous amount of aloe vera cream and the pain subsided after a few minutes. During the next 4 hours, I applied cream 3 more times after it was absorbed. I didn't bother putting any cream on the oven burn at the back of my hand, as it didn't hurt at all and the burn wasn't even noticeable.
  Today I wake up and I have a very visible red spot on the minor 180 C burn at the (untreated) back of my hand. But absolutely no pain and no mark on the more severe (but treated) burn

from the 350 C soldering iron. I had never expected that cream to be so effective!"

- **YouTube comment:** *"Aloe does work. I have been sunburned before and when i use aloe, it heals quicker than if i don't."*
- **YouTube comment:** *"Aloevera is amazing I saw results instantly my red burns turned partly normal."*
- **YouTube comment:** *"The bandage over night worked amazing i just did that burned my hand with hot oil cooking took a large part off sliced up the get and slapped that on my hand it made the pain itching and swelling go down I left it on overnight its soothing."*
- **YouTube comment:** *"I'd vote it's [at least] pain relieving just because it's cooling and helps swelling go down."*
- **YouTube comment:** *"As someone who made the terrible mistake of falling asleep in the hot hot sun and had horrible sunburns I can say yes it does. Saved my life for the week after. I didn't use a gel or cream I got it straight from the plant."*
- **YouTube comment:** *"I just always figured it was because we kept the bottle of Aloe int eh refrigerator so when we used it, the burn got cool really quick."*
- **YouTube comment:** *"I watched aloe that was applied to a small but deep burn on one of my fingers. I applied a dollop every 30 minutes for about 5 hrs. It was absorbed into the burn area during that interval. After approximately 2 hours, the pain had reduced dramatically and the next morning, all I saw a very small indentation where the burn had been; absolutely no pain-nothing else. Don't know why it worked but i will keep a tube of 100% gel handy at all times."*
- **YouTube comment:** *"When I was a kid, my mom kept several large aloe plants for sunburns. the pain killing effect is massive, immediate, and no fricken way it could be a placebo. The relief is immediate, like jumping into a pool on a hot day. The aloe is a sun loving plant, so it's not just temperature relief - we'd pluck the (leaves? spikes?) from a plant sitting in full sunlight, split the skin of the plant long ways, turn it inside out, and directly rub it (gently!) on the burn. Forget any bottled goo in the stores - use it at 100%. I think those who doubt it relieves pain have only used the marketing-level dosages from stores."*
- **YouTube comment:** *"As someone who is currently recovering from a sun burn I found that plain ole aloe Vera didn't really do much. But aloe with menthol in it worked really well. (I did put on sunscreen when I went outside and reapplied, I still got burned)"*

- People have also used it to dry out pimples (acne); or treat eczema:
  - **YouTube comment:** *"I assumed [aloe vera] just reduces inflammation. I use it on my face when I get breakouts and it*

dries out the pimples, reduces redness, and keeps my face hydrated. No special treatments needed."

- YouTube comment: *"Aloe vera also helped me tremendously with my acne, now my skin is smooth."*
- YouTube comment: *"I swore by aloe before using sunscreen (yes I used to be an idiot) just straight from the plant and now I swear by it for acne scars. Even my dermatologist was surprised at the fast improvement."*
- YouTube comment: *"I can say honestly that Aloe Vera is amazing. I've had eczema for years and it comes and goes and I visited Pakistan 4 years ago where aloe grows naturally. My relatives grew aloe for themselves and gave me some and my skin healed faster and the rough texture decreased. Aloe Vera is an amazing plant."*
- YouTube comment: *"We have 3 aloe plants and use them for sunburns, pimples and cuts (not open wounds obviously) and it's amazing! Some cheaper aloe creams may contain 0.0001% aloe so don't judge until you try the real thing, but do try it, it really works."*
- YouTube comment: *"I used aloe constantly for my eczema - just cut a stalk off the plant and go to town. It relieves itching and feels cool which is sooo good - only thing is it's water based so it absorbs quickly and dries pretty much instantly, so top it off with some moisturiser afterwards. Convinced that it helped the flare ups heal quicker."*

- Studies:
  - Feb. 2017, Wound Practice and Research, 'Evidence summary: Wound management low resource communities - Aloe Vera for wound healing': *"Laboratory studies have reported aloe vera gel has an antibacterial effect against Pseudomonas aeruginosa, Staphylococcus aureus, Candida albicans and other organisms commonly seen in wounds. ... Growth of bacteria in ulcers treated with aloe vera significantly decreased (: 100% growth of bacteria on day 1 of 100% versus day growth of bacteria on day 11 of 6.7%, p<0.001). In comparison, 100% of the control ulcers remained colonised by day 11 (Level 2.c evidence).[9] ...*

    Pooled results showed significant benefits from using aloe vera compared to control treatments of petroleum jelly gauze or framycetin sulphate cream for time to complete healing (weighted mean difference 8.79 days, 95% confidence interval [CI] 2.51 to 15.07, p= 0.006). ...

    In an RCT comparing aloe vera with 1% SSD [1% silver sulfadiazine cream] for treating second degree burns, aloe vera gel was superior in managing pain. ... The aloe vera group

achieved a pain free state significantly faster than the control group (1% SSD) (mean 21 days versus mean 26 days, p=0.01). ... Efficacy of aloe vera gel for deep partial thickness burns was demonstrated in an RCT conducted in individuals with second degree burns covering less than 25% total body surface area. Patients were randomised to receive either gauze soaked in aloe vera gel (n=25) or 1% SSD [1% silver sulfadiazine cream] (n=25). Mean healing time was significantly faster in the aloe vera group (mean 11±4.18 days versus mean 24.24±11.16 days, p<0.00001) (Level 1.c evidence). [6]"

- Jan. 2019, Iranian Journal of Medical Sciences, 'The Effect of Aloe Vera Clinical Trials on Prevention and Healing of Skin Wound: A Systematic Review': *"In total, 23 trials that met the inclusion criteria were studied. The results of the studies showed that Aloe vera has been used to prevent skin ulcers and to treat burn wounds, postoperative wounds, cracked nipples, genital herpes, psoriasis, and chronic wounds including pressure ulcers."*

Ashwagandha

- Not researched yet.

Baking soda

- Baking soda is great for a wide variety of cleaning, disinfection, and health reasons.
- Drink on empty stomach.
- Many people brush their teeth with baking soda with clean, white teeth as a long-term result:
  - The baking soda is usually mixed with coconut oil and maybe a bit of salt to create an alternative toothpaste. After this author reading 600 comments of people doing this, the only spotted issue was teeth sensitivity with some. In my case, with the aid of plaque coloring tablets, I noticed that baking soda very effectively removed plaque, much more effectively than toothpaste. However, even 25% mixes would irritate the (healthy) gums around my teeth, leading to dark red circles around the teeth that quickly resulted in huge infections.
- A lot of people use baking soda for acid reflux. They tend to drink half a teaspoon of 100 ml / 4 ounces of water. Sometimes it makes the situation worse though, because the problem actually is a lack of acid. In case of combating acid reflux, some of the following comments are presented:

- **YouTube comment:** *"My friend has a daughter with an MD! She is in her 80's and keeps on asking neighbors to take her into emergency every time she has upset stomach. She told me one day from emergency. I told her to put half a tsp of baking soda in the juice of half a lemon. Wait until the bubbles go away. Then fill up the cup with water and drink. She told me that was the best solution and she never had to go to emergency for her belly [again]."*
- **YouTube comment:** *"I have always used baking soda in water for upset stomach. It works better than a lot of other things. Learned about it from my mom and my mom learned it from her mother. They used it back in the 1800s for a lot of things."*
- **YouTube comment:** *"My Dad always had a box in his pickup, he would always use it for heartburn, he lived to 92 years old."*
- **Reddit comment:** *"I remember using that and being able to taste the baking soda ever so slightly. I go old school and drink the stuff mixed with water when i get heart burn. It's ungodly in flavor but boy does it kill heartburn like nothing else."*
- **YouTube comment:** *"Have been drinking a teaspoon of baking soda mixed with warm water every morning for a long time. It's awesome! Alleviates any constipation, upset stomach, etc. excellent internal cleanser and ph balancer."*
- **YouTube comment:** *"I was on the verge of unalivng myself from my horrible stomach problems. YOU changed my life!!"*
- **YouTube comment:** *"I used to take a tea spoon of baking soda on a mug of lukewarm water against heartburn for numerous years. It helped and got me immediate relief, but I think the underlying causes aren't addressed by it. As I know today, my heartburns were caused by poor diet + too much coffee + mental factors (stress, anxiety)."*

- In case of combating candida and other stomach bugs:
  - Jan. 2024, issue #1, Zagazig Nursing Journal, 'Sodium Bicarbonate: A New Promising Home Strategy for the Treatment of Vaginal Yeast Infection' (a 2021 study showed the same thing): *"The current study concluded that after using baking soda, all symptom of a vaginal yeast infection has been subsided."*
  - **YouTube comment:** *"The true benefit of baking soda is not its ability to alkalize but rather its profound candida crushing properties. It's abilities in this regard are actually documented as being a phenomenon. I was dealing with candida overgrowth in my gut, mouth, and sinuses and was able to restore the health of these microbiomes with not only essential oils such as tea tree and peppermint but also a strong baking*

soda and water mixture. My dental hygienist and dentist were astounded at the health of my gums in just one month time."

- **Reddit comment:** *"I am using baking soda now. I found that it is working. My stools are more solid now. My bowel makes less noises. I don't feel like I must go to the toilet all the time. Nevertheless, it does not work if I would drink something else like herbal teas, tea, coffee. I must drink baking soda all day long. I add half a spoon of baking soda in a small bottle and that's it."*
- **Reddit comment:** *"I have only used it to brush, when my tongue was white etc. It helped."*

- In case of combating mouth issues:
  - **YouTube comment:** *"I had a very sore throat... I have no tonsils so I noticed it was candida. So I put one teaspoon of baking soda in warm water and did a gargle and drank the remainder. My throat cleared within the hour. The razor blade soreness had gone. It is a wonderful product. My mum used it for indigestion."*
  - **YouTube comment:** *"Also works for abscessed tooth. If you are in a lot of pain put a small chunk or pinch of baking soda on the infected tooth over night or for a few hours at a time and the alkalinity will change the ph of the infection and eventually clear the matter up. Stops the pain."*
- In case of kidneys and urinary tract infection:
  - **YouTube comment:** *"Yes, baking soda surely helps urinary infection. I suffered too many times with this. I then used 1/2 tsp BS in cup of water every hour and my UI was gone. However, don't delay getting antibiotic if not getting better!!"*
  - **YouTube comment:** *"Hi, If I have a urinary tract infection/ burning when passing urine instead of buying over the counter Mx such as Ural I dissolve a small amount of baking Soda in water and drink it...works every time. It also helps with feminine freshness by regulating the Ph levels."*
  - **YouTube comment:** *"Baking soda has been used in TCM for centuries for kidney health. My cat was diagnosed with kidney renal failure in early 2019 and mixing it in her water has basically stopped further deterioration looking at all the six monthly blood tests. She's 15 and looking likely to see her 18th."*
- In case of improving general health:
  - **YouTube comment:** *"I've been putting it in my water 3x daily along with magnesium, potassium, glucosamine and calcium in the morning. After a week I could tell quite a bit of difference. Now 3 weeks in, I am amazed. So many of my health conditions have improved so much that it's nearly miraculous."*
- In case of mixing it in with food:

- **YouTube comment:** *"I've been adding 1/4 tsp baking soda to my morning coffee and now my coffee is no longer coffee without this ingredient. ... please remember not to add the boiling water too fast because it can quickly rise up frothing, and overflow. Just add gradually while continuously stirring..."*

- In case of combating cancer:
  - May 14, 2023 upload by 'Dr. Eric Berg DC' YouTube channel, 'The Dangers and Benefits of Baking Soda' (top comment with 930 likes on April 23, 2024): *"A lady from church was diagnosed with colon cancer she started taking 1 teaspoon of baking soda in a 1 cup of warm water on an empty stomach for 3 weeks she also took charcoal tablets and drank lemon water after 3 weeks her cancer was gone and her doctor kicked her out of his office and didnt want to know how she cured her cancer."*
  - **YouTube comment:** *"I'm a Breast Cancer Survivor of 6 years now... I met a Hispanic lady who had also been Diagnosed as to having Ovarian Cancer, the only thing is she couldn't get treatment at a hospital because she didn't have a Social Security Card. She said she was in extreme pain and was so desperate. She start putting a pinch of Baking soda, and Lemon. She drank that three times a day. She states her pain started to subside to the point where it practically disappeared. She went to the Doctor to see how far her Cancer had spread. That when the Doctor informed her that they didn't see any forms of Cancer in her Ovaries. The doctor then asked what did she do, the lady told the Doctor, then the doctor told her she shouldn't have done that...*
    I too was ever sceptical as well. But her sister came the next day, Then said "tell her what I did and how became healed" . The lady allowed her sister to talk. Come to find out her sister said that same thing."
  - "I have a history of bladder cancer and live a healthy lifestyle, I have used baking soda occasionally. Today I was given terrible news that I have several cancers in my bladder."

- In case of combating arthritis:
  - **YouTube comment:** *"I learned from a old gym rat to drink soda and water before workout, it does enhance your energy increase stamina , then moved on. 8 yrs ago arthritis got bad. Aches and pain everywhere, so went back to drinking baking soda 3 times a day, beginning as I get up still asleep. I take 12 Oz [350 ml] warm distilled water and one level teaspoon baking soda, u immediately go to the can and blow it out. The urine stinks like hell. I call it flush and clean, but ... I'm 80 [and] pretty much pain free now. Been 5 yrs 3 X a day steady use . Full*

of energy. ... No doubt in my mind that the arthritis came from the lack of nutrients and chemicals."

- **YouTube comment:** *"This is a great post. A pinch or two of baking soda in 4 oz or so of cool water just makes you feel good instantly. Especially so if you have ankylosing spondylitis arthritis."*

- In case of cleaning and removing odors:
  - **YouTube comment:** *"Another great use for baking soda is to remove stains from your hands. I discovered this by accident one day when I was trying to get rid of printer ink stains on my hands. Sprinkle some on wet hands and the stains cling to the baking soda and just wash the stains away!"*
  - **YouTube comment:** *"I have been using it under my armpit for years. Works like a charm. It is the only deodorant that I use."*
  - **YouTube comment:** *"I've used baking soda for my acid reflux but my favorite use is to deep cleanse my hair. I sprinkle it on my scalp (when its really oily) then work it in and brush it through. Then I take ACV mixed with warm water into the shower with me and drizzle it over my hair and work my hands through it until it's done fizzing. Then I rinse and shampoo/condition as normal. My hair gets so shiny and stays cleaner longer."*
- Other reported uses of baking soda:
  - **YouTube comment:** *"My wife (an old army medic in the 80s) told me she treated poison ivy for the soldiers with a baking soda paste wrapped in gauze until it dried up. ... She told the docs what she did and they were blown away. All the rashes gone usually overnight."*

Berberine

- A bitter-tasting, yellow compound found in plants as the European barberry, goldenseal, goldthread, Oregon grape, phellodendron, and tree turmeric.
- A combination of strong antimicrobials Berberine, Neem and raw garlic's Allicin is often prescribed for sufferers of small intestinal bacterial overgrowth (SIBO), who have large amounts of bad bacteria that need to be killed off - and possibly replaced through probiotics as kefir. They target different bad bacteria in the gut in varying ways.
- Positive Berberine experiences for SIBO, are listed in that section.
- Less positive Berberine experiences:
  - **Reddit comment:** *"Berberine made my skin bad, also so much bloating, also affect testosterone level negatively. Does not change glucose level. Very big hype."*

- Goldenseal, a medicinal plant used by Native Americans for many centuries, among other things for diarrhea, contains berberine, but the concentrations are too low to be considered therapeutically effective.

Boswellia

- The Boswellia sacra (Middle East, Horn of Africa, etc.) and Boswellia serrata (India and Pakistan mainly) trees. They are commonly called the frankincense tree or olibanum tree. The resin from these trees is used to make extracts from.
- Mainly studied for its anti-inflammation and anti-arthritis benefits (with a combination of turmeric/curcuma and boswellia being particularly potent), although promising studies have also been carried out on asthma and Crohn's Disease. Traditionally used for many other diseases as well.
- Studies:
  - Aug. 29, 2013, Molecular Medicine Reports (Indian study), 'Clinical evaluation of a formulation containing Curcuma longa and Boswellia serrata extracts in the management of knee osteoarthritis': *"A formulation containing Curcuma longa and Boswellia serrata extracts (CB formulation) was evaluated for safety and efficacy in osteoarthritic patients and directly compared with the selective COX-2 inhibitor, celecoxib. In total, 54 subjects were screened, 30 subjects were enrolled and 28 completed the study. The treatment was well tolerated and did not produce any adverse effect in patients, as judged by the vital signs, hemogram, liver and renal function tests. The CB formulation at 500 mg administered twice a day, was more successful than administering celecoxib 100 mg twice a day for symptom scoring and clinical examination. The formulation was found to be safe and no dose-related toxicity was found. ...*
    Boswellia gum resin and turmeric have been in active use in traditional medicine for thousands of years. Boswellia extract has shown promise for the treatment of asthma (14), rheumatoid arthritis (15), Crohn's disease (16), OA of the knee (17–19) and collagenous colitis (20). The biological activity of Boswellia serrata arises from the boswellic acids, of which the 3-O-acetyl-11-keto-boswellic acid (AKBA) is the most active (21–24). ...
    The CB formulation consisted of 350 mg Curcuma longa extract (BCM 95®, Arjuna Natural Extracts Ltd, Aluva, Kerala, India) containing 70% curcumin, 17% demethoxycurcumin, 3.5% bis-demethoxycurcumin and 7.5% turmeric essential oils and

150 mg Boswellia serrata extract (BosPure®, Arjuna Natural Extracts Ltd, Aluva, Kerala, India) containing 75% boswellic acids and 10% AKBA in 500-mg hard gelatin capsules."

- Nov. 17, 1998, European Journal of Medical Research (Indian study), 'Effects of Boswellia serrata gum resin in patients with bronchial asthma: results of a double-blind, placebo-controlled, 6-week clinical study': *"The gum resin of Boswellia serrata, known in Indian Ayurvedic system of medicine as Salai guggal, contains boswellic acids, which have been shown to inhibit leukotriene biosynthesis. In a double-blind, placebo-controlled study forty patients, 23 males and 17 females in the age range of 18 - 75 years having mean duration of illness, bronchial asthma, of 9.58 +/- 6.07 years were treated with a preparation of gum resin of 300 mg thrice daily for a period of 6 weeks. 70% of patients showed improvement of disease as evident by disappearance of physical symptoms and signs such as dyspnoea, rhonchi, number of attacks, increase in FEV subset1, FVC and PEFR as well as decrease in eosinophilic count and ESR. In the control group of 40 patients 16 males and 24 females in the age range of 14-58 years with mean of 32.95 +/- 12.68 were treated with lactose 300 mg thrice daily for 6 weeks. Only 27% of patients in the control group showed improvement. The data show a definite role of gum resin of Boswellia serrata in the treatment of bronchial asthma."*
- May-June 2011, Indian Journal of Pharmaceutical Sciences, 'Boswellia Serrata, A Potential Antiinflammatory Agent: An Overview': *"The oleo gum-resins contain 30-60% resin, 5-10% essential oils, which are soluble in the organic solvents, and the rest is made up of polysaccharides. Gum-resin extracts of Boswellia serrata have been traditionally used in folk medicine for centuries to treat various chronic inflammatory diseases. ...*
  Three renowned ancient texts form the pillars of classical Ayurvedic Science, which has its roots in India: Charaka's Charaka Samhita (c.B.C. 700), the first fundamental medical text; Susruta's Susruta Samhita (c.B.C. 600), which attempted to amass the entire medical knowledge, with special focus on surgery; and the two-volume tome comprising Astanga Samgraha and Astanga Hridaya (c.130-200 A.D.), written by Vagbhata the Elder and Vagbhata the Younger, which synthesized the works of Charaka and Susruta and summarized the eight parts of Ayurveda in prose and verse forms.
  The first two pillars of Ayurveda describe the antirheumatic (antiarthritis) activity of gugguls-the gum-resins of trees[16–20]. In addition to its beneficial use for arthritis, this gummy resin is also mentioned in traditional Ayurvedic and Unani

texts as an effective remedy for diarrhoea, dysentery, ringworm, boils, fevers (antipyretic), skin and blood diseases, cardiovascular diseases, mouth sores, bad throat, bronchitis, asthma, cough, vaginal discharges, hair-loss, jaundice, hemorrhoids, syphilitic diseases, irregular menses and stimulation of liver. It is also diaphoretic, astringent, diuretic and acts both as internal and external stimulant.

Modern medicine and pharmacology strongly point out to its use as an antiarthritic, antiinflammatory, antihyperlipidemic (controls blood lipids), antiatherosclerotic (anticoronary plaque), analgesic (pain-reliever) and hepatoprotective (protects the liver)[15,21–24]. ...

Kulkarni et al. and Chopra et al. have reported clinical trials of Boswellia's antiinflammatory properties in combination with Withania somnifera, Zingiber officinate and Curcuma longa and the isolated effects of Boswellia on rheumatoid arthritis could not be revealed[50,51]. However, the clinical trials of gum-resin of Boswellia alone have shown to improve symptoms in patients with osteoarthritis, and rheumatoid arthritis[52,53]. The boswellic acid from Boswellia serrata, when tested on new model i.e. Papaya Latex Model, showed significant activity of mean 35% inhibition of inflammation. ...

In contrast to non-steroidal antiinflammatory drugs (NSAIDS), which are well known to disrupt glycosaminoglycan synthesis, thus accelerating articular damage in arthritic conditions, boswellic acids have been shown to significantly reduce glycosaminoglycan degradation[40–43]. ...

A clinical trial conducted by Raychaudhuri and co-workers in India has shown that the extract of the plant, Boswellia serrata, can reduce pain and considerably improve knee-joint functions, in some cases providing relief even within seven days."

Bromelain

- A group of enzymes that break down proteins, which only are found in the stems surrounding hard part of the ananas fruit. The concentration in the soft fruit itself is much lower.
- Bromelain appears to be a near miracle "drug". It strongly reduces inflammation throughout the body, whether it involves sinusitis or arthritis. It helps heal bruises and hematomas, and aids in the recovery of heart disease patients. Similar to allicin in garlic and vitamin K2, can dissolve arterial plaque. It also seems to be the key component in removing eye floaters.

- Bromelain is often combined in supplement pills with the similarly anti-inflammatory quercetin, mainly found in red onions.
- Bromelain's main reported side-effects are stomach upset and an increase in heart rate.
- Studies:
  - Dec. 10, 2012, Biotechnology Research International, 'Properties and Therapeutic Application of Bromelain: A Review' (study by Indians): *"Bromelain accounts for many therapeutic benefits like the treatment of angina pectoris, bronchitis, sinusitis, surgical trauma, and thrombophlebitis, debridement of wounds, and enhanced absorption of drugs, particularly antibiotics. It also relieves osteoarthritis, diarrhea, and various cardiovascular disorders. Bromelain also possesses some anticancerous activities and promotes apoptotic cell death."*
  - June 2023, Clinical Nutrition ESPEN, 'Bromelain supplementation and inflammatory markers: A systematic review of clinical trials': *"Bromelain [has] been used to reduce the significant side effects of available anti-inflammatory drugs."*
  - July 18, 2016, Biomedical Reports journal, 'Potential role of bromelain in clinical and therapeutic applications (Review)' (Indian report): *"A clinical study demonstrated that bromelain administered to boxers completely cleared all bruises on the face and haematomas of the orbits, lips, ears, chest and arms in four days (85)."*
  - Ibid. *"In a murine model of acute asthma, bromelain decreased airway reactivity and sensitivity to irritants, decreased markers of lung inflammation (including infiltration by eosinophils and leukocytes) and moderated aspects of local airway immunity (99,100). Numerous reports have documented the benefits of bromelain for sinusitis (101,102). A previous study showed that administration of bromelain among children suffering from acute sinusitis shortened the duration of symptoms and accelerated recovery when compared with usual care regimens (103). Furthermore, sinusitis patients that received bromelain demonstrated complete resolution of breathing difficulties and inflammation of the nasal mucosa (104)..."*
  - *"Another study described that bromelain was effectively involved in the treatment of acute thrombophlebitis by decreasing the walking impairment in patients, and symptoms of inflammation, including skin temperature, tenderness, edema and pain (90). It has been shown that bromelain facilitated functional recovery of the heart by limiting myocardial injury in ischemia experiments (90). Bromelain also increased aortic flow, and reduced the infarct size and the degree of apoptosis (90,91). ... In addition, there is an evidence*

that bromelain protected against ischemic injury in skeletal muscle (93). In vivo and in vitro studies have shown that bromelain dissolved arteriosclerotic plaque in rabbit aorta and it clearly explains the potent fibrinolytic activity of bromelain, which functions by breaking down cholesterol plaques (94,95). In experimental animals, bromelain exerts an anti-hypertensive effect when administered for prolonged time periods. Furthermore, it increases vessel wall permeability to oxygen and nutrients while increasing blood fluidity (96)."

- Ibid.: *"In patients suffering from inflammatory bowl diseases, bromelain administration reduces a variety of pro-inflammatory molecules... It has been reported that bromelain was successfully used in the treatment of ulcerative colitis and patients showed rapid improvement of symptoms (97)."*
- *"Furthermore, bromelain administration resulted in significant decrease in pain and stiffness in patients with knee osteoarthritis (98). ... In a rat model of rheumatoid arthritis, treatment with bromelain combined with cyclosporine reduced destructive arthritis and inflammation (105,106). In addition, a clinical study demonstrated that bromelain was administered to patients with arthritic joint swelling and a significant to complete decrease in soft tissue swelling was observed (107)."*

- Experiences:
  - **Reddit comment:** *"I'm 11 days post op... 4 days before surgery and had a bottle of 100% pure pineapple in the week leading up. I kept going with the arnica, started bromelian the day after surgery, kept drinking the pineapple juice, and FWIW... I've had barely any pain and very minimal bruising/swelling."*
  - **Reddit comment:** *"I took a well made bromelin+rutin+enzyme supplement made by Nestlè for my tendon issues. It worked wonder, Better then the true medications."* **Comment:** *"Nestle owns Garden of Life, the company that USED to make [your] Wobenzym N, a wonderful supplement that unfortunately has been discontinued. Given that Nestle is in the business of destroying health, it kind of makes sense."*
  - **YouTube comment:** *"I took Bromelain for numbness in my fingers. I didn't notice any improvement there, but within days my digestion completely normalized. I had been suffering with chronic diarrhea for a decade, since taking heavy chemo treatment for breast cancer. My digestion has remained normal now for 5 months. The relief is unbelievable. Secondly, the bursitis I was struggling with in both my hips, dissappeared after taking Bromelain for about 3 months and has stayed away. I take one tablet a day. I hope this will be helpful to others."*

- Studies and testimony related to Bromelain intake improving eye floaters (picked up on this through YouTuber @MictheVegan):
  - March 5, 2024, Investigative Ophthalmology & Visual Science, 'Forward Light Scattering of the Vitreous Gel After Enzymatic Aging: An In Vitro Model to Study Vitreous Opacification': *"Forward light scattering was found previously to be increased in eyes with symptomatic floaters. ... Using an objective setup to measure forward light scattering, we studied the effects of enzymatically digesting the components of the vitreous [eye] body... When collagenase or bromelain is applied in hyaluronic acid depleted vitreous gels [which greatly increases forward light], the increase in forward light scattering is reversed partially."*
  - Aug. 26, 2020, Applied Sciences, 'Treatment of Symptomatic Vitreous Opacities with Pharmacologic Vitreolysis Using a Mixure of Bromelain, Papain and Ficin Supplement' (Taiwanese study): *"Methods: Our research was scheduled in Southern Taiwan between April 2017 and December 2017. ... Each of our specially designed capsules contained 190 mg bromelain, 95 mg papain and 95 mg ficin. ...*
    Results: In Experiment 1, 80 subjects with one SVO [symptomatic vitreous opacity, i.e. eye floaters] were reduced to 24 cases (30.0%; 24/80), 40 participants with multiple SVOs were decreased to 11 cases (27.5%; 11/40) three months later. In Experiment 2, the numbers of patients with SVOs in the placebo group was similar after three months. The disappeared rates of SVOs by treatment with fruit enzymes was 65.5%, 70.0% and 75.5% and for those taking one, two and three capsules daily as therapy, respectively. Hence, the results showed that the effects of treating SVOs in a dose-dependent manner; the higher the dose, the greater the SVO reduction. ...
    The best corrected visual acuity (BCVA) was improved, but it was not statistically significant difference. ...[Mentioned in an editorial review of the study, but not visible in the report: "In addition, the patients' vision elevated from 0.63LogMAR [roughly 20/85, or -1.50] to 0.19LogMAR [roughly 20/31, or -0.60] ($P < 0.05$)."]
    According to the past analysis, vitreous liquefaction, flecks of protein, vitreous debris, inflammatory balls, blood particles and torn retina contributed to the SVOs. If left untreated, they could cause impairment of vision and permanent visual loss in the late stage [3]. ... Patients with more than 10 SVOs or a cloud in front of vision had a high risk of developing retinal tears. ... When SVOs aggregate to fuse together, they may be fixed or mobile especially after the development of posterior vitreous detachment (PVD) [7]. ... Moreover, ocular dark floaters alone

or combined with flashes of light may be the precursor to retinal detachment (RD) or VH [8]."

- Oct. 4, 2021, Translational Vision Science & Technology, 'Dietary Intervention With a Targeted Micronutrient Formulation Reduces the Visual Discomfort Associated With Vitreous Degeneration': "61 patients with symptomatic vitreous floaters were randomized to consume daily, the active supplement consisting of 125 mg L-lysine, 40 mg vitamin C, 26.3 mg Vitis vinifera extract, 5 mg zinc, and 100 mg Citrus aurantium or placebo for 6 months. ... At 6 months, there was a significant decrease in vitreous opacity areas in the active group ($P < 0.001$) and an insignificant increase in vitreous opacity areas in the placebo group ($P = 0.081$). Also, there was a significant improvement in photopic functional contrast sensitivity with positive contrast polarity in the active group after supplementation ($P = 0.047$)."

- Experiences with eye floater improvement and criticism of the bromelain method are situated in ISGP's eyesight article. Far from everyone has documented improvement, with the focus generally only being on bromelain; not the other two compounds of the Taiwan study. Many people report that their eye fluid became less viscous due to bromelain intake, allowing floaters to move more. Others say the floaters became more see-through, eyt were not fully cured of floaters.
  - **YouTube comment:** *"Yes!!! 🖐️ Amazing how well this worked for me by accident. I had been noticing that I was getting eye floaters (really?!!!) and had eaten fresh pineapple 🍍 and next thing I know I heard about this and then realized they were gone! I was like ohhh that's why those eye floaters left 😱"*
  - **YouTube comment:** *"Use castor oil for dry eyes too but the pineapple 🍍 is amazing. Im 69 and still have 20/20 vision and they're checked each year. I eat citrus, papaya, and figs too but noticibly after pineapple they went away!"*
  - **YouTube comment:** *"For me, bromelain has actually helped as there were floaters that were close to my retina right at the center of my vision and I could not even read clearly, I was so stressed considering FOV vitrectomy. Before going for such a risky procedure, I thought I will give bromelain a chance and it worked to move the floater from the central portion of my vision, it didn't reduce the floaters just made it more fluid, so it takes me a while to see clearly till the floaters settle but I can finally see to the point that I can read again without magnifying letters."*
  - **YouTube comment:** *"Taking bromelaine+ 200gr of pineapple every morning for 2 month. Floaters are moving faster, they are*

still annoying me, and that's all the story. Taiwany study it's a fake, i hate them."

- **YouTube comment:** *"my eye floater issue may have got some benefit by eating pineapples. its difficult to credit it just to pineapples, but they are less now."*
- **YouTube comment:** *"do belive the pineapple study is bogus though. The study reused "After" images of a floater free eyeball from another study."* **Note:** I have no clue how someone would even figure this out. I can't find anything about it.
- **YouTube comment:** *"I have taken Bromelain for one year with other eye supplements with no success. The floaters have not changed. Neither worse nor better."*
- **YouTube comment:** *"I have been taking bromelain more than a year now daily. no changes in floaters."*
- **YouTube comment:** *"I wanted to check in with my experience using Bromelain to alleviate my eye floaters. My floaters got really bad after I flew to Florida. The low pressure from flying at altitude caused my vitreous to detach in my right eye where I already have asteroid hyalosis. I couldn't fly back home until I got my eye checked for retinal detachment. The vitreal detachment placed a really large spider like web in my peripheral vision that was entangled in vitreous that obscured my sight. I heard about the pineapple research so I started taking Bromelain supplements (500 mg) daily because I didn't want all that sugar from pineapple. After 2 weeks I noticed small floaters breaking away from the affected area and moving to my lower peripheral field. The vitreous itself seem to be different texture wise too. I wasn't getting real results until I started taking a Black Walnut supplement (1800mg) per day. I noticed that the affected area started getting clearer. Black walnut is one of the healthiest supplements you can take and it eradicates many different ailments by cleaning the microbiome of junkie microbes, parasites and restoring balance. It also oxygenates the blood like crazy, which is good for your heart, eyes and knocks out parasites. I have also been dieting and eating a lot of salmon, which is high in fatty acids which is good for the eyes. I cut out gluten as part of my diet and my gut is able absorb the supplements much better which makes them more potent. I have lost 12 pounds in about 5 weeks too. I have been taking the Black Walnut for roughly two weeks, and noticed a few days ago that the bags that have been under my eyes for decades are starting to go away. Its pretty incredible. So the point I am making is you have to take steps to get your gut into condition to make sure your can absorb the Bromelain properly for maximum effect, so take steps to ensure you do*

that and take a high potency or high quality enzyme supplement."

Charcoal

- In recent times charcoal has been rediscovered as an unlikely but multifunctional health substance. In farming, it is the key component in "biochar", in which charcoal's countless square meters of internal space become long-term housing for all kinds of aerobic and anaerobic bacteria, and most importantly maybe, the mycorrhizal fungi, which forms a symbiotic relationship with plant roots and greatly benefits plant growth.
- Activated charcoal is regular charcoal (carbon) that has been micronized, and in that manner has been made particulary porous. It is used in anything from walterfilters to gas masks, it is extremely good at absorbing toxic gases and liquids.
- Filtering air:
  - **Reddit comment:** *I have these sacks of activated charcoal that naturally suck up any stink or odour in a 90 sq ft [27m2] area. I keep one in my car under my seat and near my cats litter pan and they work amazing."*
- Activated charcoal became somewhat of a social media trend in the 2010s, to the point that in 2018 New York City banned the sale of this type of icecream, because it interferes with medicines. [62] Looking at recipes generally one or two tablespoons of activated charcoal are used to make about 500 grams (1 pound) of icecream.
- In water filters with activated charcoal substances as fluoride and lead are removed 98-100%.
- In the body activated charcoal appears to primarily filter "foreign" elements, and not so much vitamins and minerals. Charcoal also doesn't leave the gastrointestinal tract:
  - April 26, 2023, ncbi.nlm.nih.gov, 'Activated Charcoal': *"No significant toxicity from activated charcoal exists as it is not systemically absorbed; however, adverse effects from the administration, as listed above, such as emesis, aspiration, and bowel obstruction, can occur."*
  - 2018, issue 7, Current Medical Research and Opinion journal, 'Is there a role for charcoal in palliative diarrhea management?' (received: July 26, 2017): *"It was found that the main precursors of diarrhea include drugs and bacterial infection. Activated charcoal has a firm history in its ability to attract and expel ingested toxins from the gastrointestinal tract. It acts to prevent system absorption of these adverse entities, adsorbing them on*

the surface of its particles, making it a suitable diarrheal treatment."

- April 26, 2023, ncbi.nlm.nih.gov, 'Activated Charcoal': *"Most ingested toxins will have decreased systemic absorption in the presence of activated charcoal, including acetaminophen, aspirin, barbiturates, tricyclic antidepressants, theophylline, phenytoin, and a majority of inorganic and organic materials. [13][14][15][14] It is important to note that activated charcoal does not effectively adsorb alcohols, metals such as iron and lithium, electrolytes such as magnesium, potassium, or sodium, and acids or alkalis due to the polarity of these substances."*
- Feb. 1972, Journal of Animal Science, 'Effect of Prolonged Oral Administration of Activated Charcoal and of Ronnel on the Well-Being of Sheep': *"The addition of activated charcoal of plant origin at the level of 5% of the total diet, as biweekly drench, or in combination with the organophosphate insecticide, ronnel, at the level of 1,000 ppm in the diet did not significantly affect the blood serum level or urinary excretion of total calcium, copper, iron, magnesium, inorganic phosphorus, potassium, sodium, zinc, creatinine, uric acid and urea nitrogen. In addition no changes were found in the serum alkaline phosphatase and total protein levels nor in urine pH or 24-hr. volume."*
- Jan. 1994, Research in Veterinary Science, 'Toxicity of aflatoxin B1 in broiler chicks and its reduction by activated charcoal': *"Improvements in serum total protein concentration and ALKP activity (Jindal et al., 1994; Edrington et al., 1996), calcium and phosphorus concentrations (Jindal et al., 1994), and AST activity (Dalvi and Ademoyero, 1984; Dalvi and McGowan, 1984; Jindal et al., 1994) have been reported when activated charcoal was added to the diet."*

- Studies show that activated charcoal has the following health effects:
  - 1,344 mg of activated charcoal, 3 times a day, for just two days, improved symptoms of intestinal gas for 34% of participants, with ultrasounds being clearer due to a lessening of the gas. It is thought the gas moving through the charcoal pores is being neutralized. Other studies, including one for 10 days with 45 mg of simethicone and 140 mg of activated charcoal, again taken 3x a day, also showed great improvement in the amount of intestinal gas produced. [63]
  - At least in rats, in amounts of 4 grams per kilogram, it has repeatedly shown to reduce intestinal and kidney inflammation. [64]

- It helps the kidney filter out toxins, in particular with regard to proteinuria. [65]

- Activated charcoal has been recommended as being part of an anti-Candida treatment, to the tune of 20 to 35 grams a day, as it absorbs released Candida toxins, as well as any large Candida die off. Zeolite should be able to do it too.
- Then there are online claims of activated charcoal:
  - May 14, 2023 upload by 'Dr. Eric Berg DC' YouTube channel, 'The Dangers and Benefits of Baking Soda' (top comment with 930 likes on April 23, 2024): *"A lady from church was diagnosed with colon cancer she started taking 1 teaspoon of baking soda in a 1 cup of warm water on an empty stomach for 3 weeks she also took charcoal tablets and drank lemon water after 3 weeks her cancer was gone and her doctor kicked her out of his office and didnt want to know how she cured her cancer."*

Chlorophyll

'Effect of Food Preparation Technique on Antioxidant Activity and Plant Pigment Content in Some Vegetables Species'
Journal of Food and Nutrition Research, 2013, Vol. 1, No. 6, pp. 121-127.

3. Results

Chlorophyll and carotenoid content in green leafy vegetables was measured in fresh and boiled vegetables and the results were presented in Figure 1, Figure 2 and Figure 3.

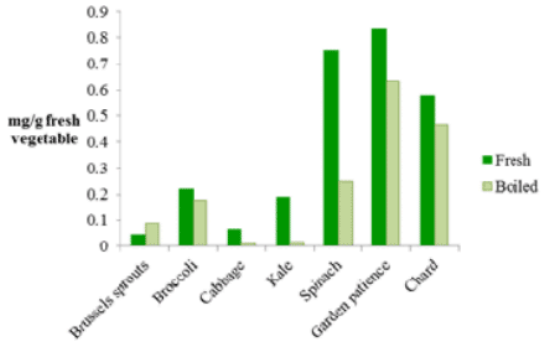


Figure 1. Chlorophyll a content in fresh and boiled vegetables

- Chlorophyll is a green pigment in plants that convert light energy into chemical energy in the form of glucose.
- Ordinary vegetables tend to fluctuate between 0.01 and 0.085% chlorophyll content (0.1-0.85 mg/g). Spinach and chard range around 0.07-0.08%, broccoli and kale around 0.02% (with kale not retaining any after cooking), and Brussels sprouts, cabbage and lettuce all hovering around 0.005-0.015%.

- The green algae chlorella (vulgaris, the most common type in lab work and supplementation) has much higher chlorophyll contents. The natural, "wild type" appears to contain between 9 and 14mg/g (0.9 - 1.4%) of chlorophyll:

'Isolation and Characterization of Novel Chlorella Vulgaris Mutants With Low Chlorophyll and Improved Protein Contents for Food Applications'
May 2020 - Frontiers in Bioengineering and Biotechnology

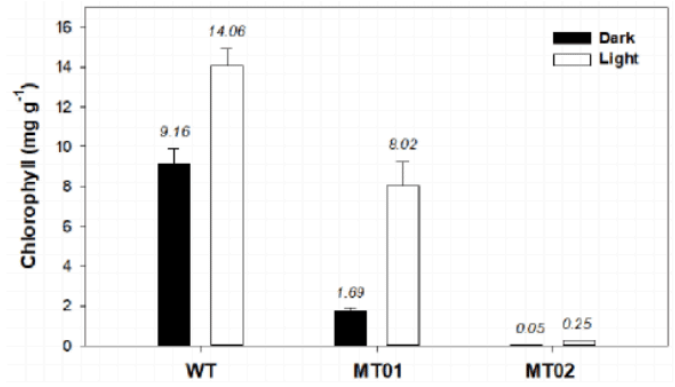


FIGURE 4 | Chlorophyll content (mg g^{-1}) of *Chlorella vulgaris* wild type and mutants grown in 250-mL Erlenmeyer flasks under dark and light conditions. Values are given as means ± standard deviation of three biological replicates ($n = 3$).

- Chlorophyll seems to be degraded to some extent by heat, especially by temperatures over 60 degrees Celsius. [66]
- With supplements, chlorophyll can be taken in liquid and pure form, or as part of chlorella (vulgaris) tablets, the green algae. Both forms have people reporting on favorable effects.
- Chlorophyll / Cholerella detoxifies the body from at least some insectides:
  - 1984, issue 1, Drug and Chemical Toxicology journal, 'Detoxification of Chlordecone Poisoned Rats with Chlorella and Chlorella Derived Sporopollenin': *"Cholerella protothecoides accelerated the detoxification of chlordecone poisoned rats, decreasing the half-life of the toxin from 40 to 19 days. The ingested algae passed through the gastrointestinal tract unharmed, interrupted the enteric recirculation of the persistent insecticide, and subsequently eliminated the bound chlordecone with the feces."*
- Chlorophyll / Cholerella detoxifies the body from heavy metals, although its effect in this regard might be milder than various other compounds:
  - Feb. 2022, Journal of Applied Phycology, 'Quantitative evaluation of Chlorella vulgaris for removal of toxic metals from body': *"Chlorella 500 and 1000 mg/70 kg HED [Human Equivalent Dose] showed significant reduction in whole body retention of strontium (26.05 and 46.40%, respectively) and*

thallium (18.06 and 38.39%, respectively). Chlorella treatment increased the excretion of strontium and thallium through feces and urine."

- April 16, 2019, Antioxidants journal, 'The Long-Term Algae Extract (Chlorella and Fucus sp) and Aminosulphurate Supplementation Modulate SOD-1 Activity and Decrease Heavy Metals (Hg++, Sn) Levels in Patients with Long-Term Dental Titanium Implants and Amalgam Fillings Restorations': *"The long-term treatment with [chlorella] algae extract and aminosulphurates for 90 consecutive days decreased certain heavy metal levels (Hg++ [mercury], Ag [silver], Sn [tin], Pb [lead], and U [uranium]) as compared with basal levels. However, Hg++ [mercury] and Sn [tin] reductions were observed after 90 days as compared with untreated controls (without dental materials)."*

- The most often reported benefit of chlorophyll is that it removes smell from sweat, but reportedly often also breath, farts, and genital areas. This works to a greater or lesser extent for people. For some people it removes acne, but also not for everyone. Experiences along these lines:
  - **Reddit comment:** *"I take chlorophyll capsules and it definitely helps with body odor! I take a stimulant for ADHD and sweat more."*
  - **Reddit comment:** *"Drinking chlorophyll works for me [in removing my bad breath]."*
  - **Reddit comment:** *"I kid you not. My poop doesn't smell if I drink a lot of chlorophyll water the day before. So he'll yeah I say it works for bo. Scentless farts ftw."*
  - **Reddit comment:** *"My [new] tables are 100% chlorella. ... I take 1 every 6 hours... I have been showering regularly with chlorhexidine gluconate. ... Anyway this is used be people in extreme odour situations. It's supposed to kill bacteria for up to 6 hours after use. ... I know some people will leave a layer of the Chlorhexidine gluconate under their arms but I didn't really wanna go down that route. I eat onions and garlic and vinegar for almost every meal. I love cheese and eggs also. Eat a lot of vegetables but not much fruit. There was no way I was prepared to cut all those things out of my diet. So anyway I bought some broken cell wall chlorophyll tablets. Took half the maximum daily amount and have noticed a massive reduction in my body odor!"*
  - **Reddit comment:** *"It definitely takes away all smell, sweat, breath, your lady parts. And it works almost immediately like same day. It's not something that needs to build up in your system. I've done the unflavored and just mix it with a cup of*

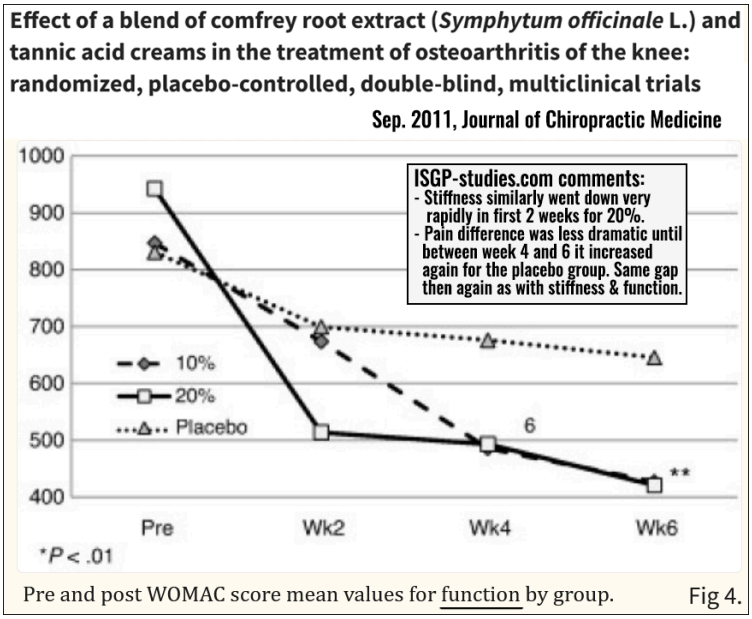
cold water and chug. I just got pills of the same brand to try. We'll see if it's works as good as the liquid."

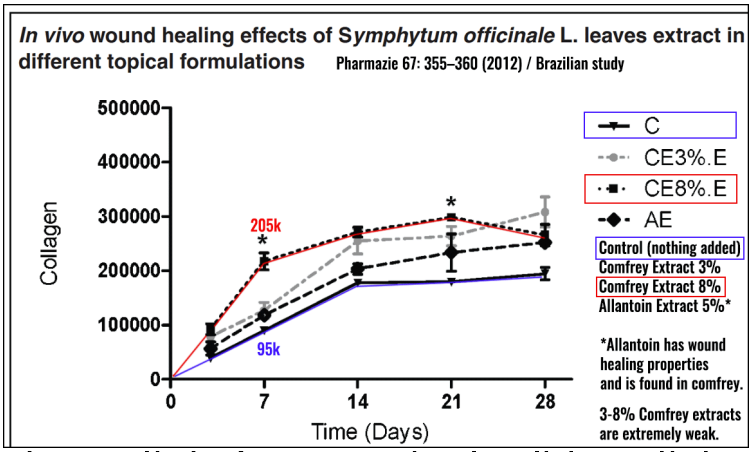
- **Reddit comment:** *"I don't know if it's the chlorophyll, but once I started drinking it daily, my skin has gotten worse. I initially started drinking it for better digestion- I do 15 drops into a glass of water with some lemon juice and chug it. It has helped my digestion! (I deal with IBS-C) I didn't know that it makes your sweat not smell but that was one of the first things I noticed. Did a 12 mile hike the other day, usually my clothes would smell like sweat after... but they didn't have any smell at all! I was super confused in the moment then found out after that it was the chlorophyll."*
- **Reddit comment:** *"I've been using chlorophyll off and on for about 2 years now. I don't have BO after drinking it for about 2 days. Your poop will be green. It didn't change my life of anything but it definitely has a beneficial use."*
- **Reddit comment:** *"I've been taking it for a week and my pee smells HORRIBLE."*
- **Reddit comment:** *"It gets rid of body odors, makes your skin clear or glowing, and it makes you shit a lot cause of digestion so that's how it could aid in weight loss."*
- **Reddit comment:** *"I take chlorophyll tablets to get rid of body odors and it definitely works in that regard."*
- **Reddit comment:** *"So I didn't even know chlorophyll has been a big thing. I bought some on a whim from Amazon (they have tons) about a week ago and within 3 days of taking it, the horrible breakouts I had on my forehead started to dry up and disappear. It wasn't until 5 to 6 days in of baby smooth skin that I realized it was the chlorophyll I've been taking. It's the only thing I changed. So I can attest that liquid chlorophyll does in fact work crazy miracles on acne. I was hoping it would dial down body odor too as it's summer now and I'm sweating way more, and it has, but just a little. It's done more for my skin than anything else and that has been a very pleasant surprise."*
- **Reddit comment:** *"I took liquid chlorophyll few years ago, does help to reduced the number of acne I had, but all my acne cured by taking zinc supplement."*
- **Reddit comment:** *"The only thing chlorophyll did to me was making my poop super dark green. I took it for body odor issue in the past, didn't see any result btw."*
- **Reddit comment:** *"Chlorella is great. Cleans out the gut and is very energizing. Puts the roses in your cheeks."*
- **Reddit comment:** *"100mg of chlorophyll 200mg of bismuth subgallate and champex for a month."*

- Other reported experiences:

- Jan. 2024 Reddit comment: *"Originally I started taking it for my acne, although it did fix most of it but the main thing it did was it got rid of my grey hair that I started getting at the age of 12. All doctors said you cannot reverse grey hair and there's nothing you can really do. At 18 I'd say half of my hair were fully grey and it was one of my biggest insecurity growing up as a kid. (I'm 21 now and I have maybe 2-3 grey hair).*
  I started taking it beginning of 2021 and by the end of the year, most of my grey hair were gone, and that's not even why I started taking it. For me this was more than I could've asked for. Keep in mind it wasn't instant, I went through 2-3 bottles [of 250ml liquid chlorophyll each] and took about a whole year, but honestly I couldn't have asked for more.
  Some other things I noticed was that my sweat started to not leave a stench at all. Also around my crotch/genital area, some people may have a specific body odour, but mine completely went away, no matter how much I sweat it never smells like anything anywhere on my body. Also it did make me feel more energized and "awake" throughout the day, although this a was a minor change but nonetheless I felt it." Comment to it: "Maybe you had a copper deficiency which caused your grey hair: ... "A bit of a misnomer, liquid chlorophyll supplements are usually chlorophyllin, a semi-synthetic, water-soluble form of chlorophyll. Chlorophyllin is derived from chlorophyll but bound to copper instead of magnesium. So when you find liquid forms of chlorophyll supplements, you're likely taking chlorophyllin."
- Reddit comment: *"I take 1-2 servings of LIQUID CHLOROPHYLL by Synergy once a day in my hydroflask during workouts, and drink the remainder after. I feel a huge difference in my workouts. ... Basically with it I don't feel the effects of lactic acid, and cramp up much less. Which allows me to workout longer, and more intensely.*
  I was about 38 and was starting to gain a lot of excess weight (235lbs). I decided to get back into shape around the same time my wife "forced" me to start taking Chlorophyll and Arginine. Skip ahead 4 years and now I workout 12-18 hours a week. 6'2, 210lbs, probably around 10% body fat. Not easy to keep the body fat down, but the Chlorophyll definitely helps. I have only used Synergy's chlorophyll..."

Comfrey


Effect of a blend of comfrey root extract (Symphytum officinale L.) and tannic acid creams in the treatment of osteoarthritis of the knee: randomized, placebo-controlled, double-blind, multiclinical trials
Sep. 2011, Journal of Chiropractic Medicine
ISGP-studies.com comments:
- Stiffness similarly went down very rapidly in first 2 weeks for 20%.
- Pain difference was less dramatic until between week 4 and 6 it increased again for the placebo group. Same gap then again as with stiffness & function.
1000
900
800
700
600
500
400
10%
20%
Placebo
6
**
Pre
Wk2
Wk4
Wk6
*P < .01
Pre and post WOMAC score mean values for function by group.
Fig 4.



3% and 8% is super-diluted comfrey. 20-35% is normal in studies, and higher is possible when using the plant itself.

- Plant with the official name of Symphytum officinale. In Great Britain it has historically been known as "knitbone", apparently for it's ability to fuse broken bones. In Germany it is known as beinwell. In Dutch it's had the unflattering name "smeerwortel": "greaseroot".
- Generally it is said that comfrey grows in moist grasslands, riverbanks and ditches in temperate regions of Eurasia and North America. However, people have been growing it in places as Brazil, Jamaica, Kenya and Nigeria under different names. It certainly can grow in tropical heat, but apparently it only reliably flowers after being triggered by winter chill.
- Non-medicinal plant characteristics:
  - The plant is rather invasive. It quickly grows out of control in the garden, even in poor soil. The only exception seems to be Russian comfrey / Bocking 14.
  - On the other hand, its deep roots make it relatively unphased by periods of little rainfall. At the same time this makes it a good plant to transform dry areas.
  - Bees love the flowers of the plant that bloom from May to June.

- Comfrey is a bioaccumulator. It drawn potassium, nitrogen, and phosphorus from deep within the ground and concentrates them in its leaves. In this manner the plant feeds surrounding plants and trees, most notably fruit trees. The plant also serves as perfect mulch and compost, breaking down before other elements and providing tons of key minerals.
- Due to its nutrient density, including protein (which seems higher than even high quality alfalfa, which sits at 22–25 grams per 100 grams of dried leaf versus 28.5 grams for comfrey below), livestock tends to quickly love eating it. Chicken eggs will benefit too.
  - Nov. 20, 2021, Science of the Total Environment, 'Comfrey (Symphytum spp.) as a feed supplement in pig nutrition contributes to regional resource cycles': *"In terms of increased efficiency in animal husbandry, comfrey has been displaced by mainly soybean and cereals. Due to its profile of macro- and micronutrients the use of comfrey could have the potential to re-establish local resource cycles and help remediate over-fertilized soils. ... The microbiome profile in feces and digesta revealed higher diversity in comfrey-supplemented piglets compared to controls... data suggest that the use of comfrey leaves may promote intestinal health. Digestive tract phosphorus levels were reduced in piglets receiving comfrey supplementation, which may ultimately affect phosphorus levels in manure...*
    Comfrey leaves showed ... 285 g/kg digestible protein [28.5 grams per 100 grams] ... 126 g/kg crude fiber [12.6 grams per 100 grams], 10.8 g/kg calcium (Ca)... a profile which is consistent with reports from varying climates... Knowledge of the use of comfrey in animal nutrition was recognized much earlier, as evidenced by its promotion as a field crop to provide sustenance for pigs during the wartime winters of World War I [Lupus, 1917]."
- The raw comfrey plant leaves, roots, and teas and creams derived from it have been used for millenia to treat back pain, bone breaks, tendon ruptures, arthritis and osteoarthritis, ankle sprains, bruises, and wounds, with also reports existing of it being effective against varicose veins, bronchitis, asthma, eye problems, ear infections, stomach issues, lingering frostbite pain, gangrene, and other health problems. It kills various pathogens and greatly increases new cell growth, from collagen production to bone.
  - 50-70 CE, Pedanius Dioscorides (a Greek physician in the Roman army), 'De Materia Medica', '4-10. SUMPHUTON ALLO' (this is thought to be Symphytum officinale [Linnaeus] —

Comfrey): *"Pounded into small pieces (and taken in a drink) they are good for bloodspitters and hernias. Applied, they close up new wounds. Boiled, they join pieces of flesh together. They are smeared on for inflammations..."*

- **Facebook comment:** *"My grandmother used to use it as a poltice to wrap around sprained and broken bones."*
- **Facebook comment:** *"In the UK we call it knitbone, everyone use to know about it and use it when I was young (am 63), but present generations have forgotten the things we all use to know."*
- **Facebook comment:** *"We called it nitbone, my grandma swore by it, we had it on our bruises etc."*
- **Facebook comment:** *"Mom used to boil the leaves and put it over our ears when we had an ear ache."*
- **Facebook comment:** *"My dear departed dad swore by it's health benefits. He deep fried the leaves for us in the 1970's. Loved it."*
- **Facebook comment:** *"From where I come from, using comfrey was a normal part of every day life. Most people grew it and other rare herbs in their back or front yard. Comfrey has an exhilarating fragrance."*
- **Facebook comment:** *"In aotearoa new zealand us maori people boil the comfrey with pork bones boil up in was about 5 year old it was rasby and delicious I'm over 70 years and still going strong."*
- **Facebook comment:** *"In Jamaica its refered to as "Cure All"."*
- **Facebook comment:** *"I grow it and was handed over to me by my gradpa right here in Kenya but i never knew much about it."*
- **Facebook comment:** *"I swear by Comfrey. My father was a doctor and used it, my granny used it and I've been using it for over 50 years on myself and clients."*
- **Facebook comment:** *"Childhood memories... My dad grew it in our garden. There was this hype about comfrey in Brazil 30 years ago and suddenly a documentary put out a lot of negative info about it and people stopped consuming it."*

- Studies exist demonstrating that comfrey indeed has the ability to quickly heal wounds, reduce pain, and restore function in tendons, bones, joints and muscle after injury much faster than without any treatment, and also (much) faster than any traditional pharmaceutical solutions:
  - Nov. 2005, Phytomedicine journal, 'Efficacy of a comfrey root extract ointment in comparison to a [NSAID] diclofenac gel in the treatment of ankle distortions: results of an observer-blind, randomized, multicenter study': *"In the treatment of minor blunt injuries several topical drugs are known to have anti-inflammatory and analgesic properties. ... The main objective of*

*this trial (CODEC_2004) was to compare the efficacy and tolerability of an ointment of [35%] Comfrey extract (Extr. Rad. Symphyti) with that of a Diclofenac gel in the treatment of acute unilateral ankle sprain (distortion) [applied] four times a day. [We judged based on] pain reaction to pressure ... swelling [and] pain sensation at rest and at movement [and] impaired movements... It was confirmatorily shown that Comfrey extract is non-inferior to diclofenac. The 95% confidence interval for the AUC (Comfrey extract minus Diclofenac gel) was 19.01-103.09h*N/cm2 and was completely above the margin of non-inferiority. Moreover, the results of the primary and secondary variables indicate that Comfrey extract may be superior to Diclofenac gel."* Actual study data:

  - Feb. 23, 2012, Phytotherapy Research, 'Comfrey: A Clinical Overview': *"After 7 days of treatment a mean relative reduction in VAS [pain] at rest of 92% was found in the comfrey cream group. The corresponding reduction in the diclofenac group was 85%. The mean relative reductions in VAS [pain] in motion were 83.2% for comfrey extract and 72.4% for diclofenac. Ankle swelling decreased by 79.5% in the comfrey root and 69.4% in the diclofenac group. The pain on pressure measured with an algometer was reduced by 80.6% in the comfrey root, but only by 74.7% in the diclofenac group."*
- May 21, 2009, British Journal of Sports Medicine, 'Efficacy and safety of comfrey root extract ointment in the treatment of acute upper or lower back pain: results of a double-blind, randomised, placebo controlled, multicentre trial': *"Results: ... In the course of the trial the pain intensity ... decreased on average (median) approximately 95.2% in the verum [35% comfrey extract] group and 37.8% in the placebo group."*
- Sep. 2011, Journal of Chiropractic Medicine, 'Effect of a blend of comfrey root extract (Symphytum officinale L.) and tannic acid creams in the treatment of osteoarthritis of the knee': *"[We have been] confirming that the 10% and 20% comfrey-based creams were superior to the reference [placebo] cream. ... Both active topical comfrey formulations were effective in relieving pain and stiffness and in improving physical functioning and were superior to placebo in those with primary osteoarthritis of the knee without serious adverse effects."* Stiffness and function improved dramatically in 20% group over placebo group and even somewhat the 10% group. Pain reduced considerably quicker, but not that extreme, until between week 4 and 6 the placebo group reported an increase in pain again, while it kept going down for the 10 and 20% comfrey groups.

- 2012 (2011 study), Pharmazie, issue 67, pp. 355–360, 'In vivo wound healing effects of Symphytum officinale L. leaves extract in different topical formulations': *"Wound healing activity of comfrey was determined by qualitative and quantitative histological analysis of open wound in rat model, using allantoin [which is part of comfrey and plays a key role in wound healing] as positive control. ... The results indicate that emulsion containing both extracts, commercial and prepared, induced the largest and furthest repair of damaged tissue. This could be evidenced from day 3 to 28 by increase in collagen deposition from 40% to 240% and reduction on cellular inflammatory infiltrate from 3% to 46%. However, 8% prepared extract in emulsion presented the best efficacy [and resulted in just over twice the collagen production compared to the control]. This work clearly demonstrates that comfrey leaves have a wound healing activity. ...*
  Allantoin is widely used in pharmaceutical and cosmetics prepa- rations due to its wound healing properties as anti-irritant, moisturizer and necrotic tissue remover (Saito and Oliveira 1986; Oliveira et al. 2008)." 3% and 8% comfrey extracts are extremely diluted.
- Dec. 7, 2012, Wiener Medizinische Wochenschrift, Journal of Chiropractic Medicine, 'Comfrey root: from tradition to modern clinical trials': *"Comfrey root extract has been used for the topical treatment of painful muscle and joint complaints. It is clinically proven to relieve pain, inflammation and swelling of muscles and joints in the case of degenerative arthritis, acute myalgia in the back, sprains, contusions and strains after sports injuries and accidents, also in children aged 3 years and older."*
- March 7, 2024, International Journal of Molecular Sciences, 'Healing of Skin Wounds in Rats Using Creams Based on Symphytum Officinale Extract': *"The macroscopic evaluation and the histological analysis of the skin defects 14 days after the intervention showed faster healing and complete healing in the skin excisions treated with oil-in-water cream with 20% extract of comfrey [root] as the active ingredient. ... Comfrey root is rich in bioactive compounds, including allantoin, salvianolic acid, and rosmarinic acid, which are known for their great free radical scavenging activity, and the high antioxidant activity of the extract may be mainly due to these compounds. The obtained extract has an antimicrobial effect on Staphylococcus aureus (1530.76/382.69), Escherichia coli (6123.01/6123.01), and Pseudomonas aeruginosa (6123.01/6123.01)."*

- Comfrey preparation for medicinal usage:

- You can use the plant leaves in spring and summer, and the roots in autumn and winter. Both have similar medicinal value.
- Crush the leaves or roots, mix it into a thick paste with flower, bee wax, coconut or olive oil, or something else. Put this mix on a cloth and wrap it around the problem area.
- Some people add the leaves to a bath, and claim this works to heal themselves.
- People have drank the leaves as tea, or ate them, including deep-frying them. This is controversial though, and why the FDA banned comfrey supplements. Mainstream science claims that the Pyrrolizidine Alkaloids in comfrey slowly cause blood pressure issues, destroy the liver, and can even result in cancer. In contrast, a lot of people claim they have been eating and drinking comfrey for decades without adverse effects. Some studies also suggest comfrey isn't as deadly as claimed:
  - Nov. 2002, Trends in Pharmacological Sciences, pp. 497-499, 'Comfrey toxicity revisited': *"The conclusion that comfrey is not safe for internal use in humans is primarily based on studies in which high levels of purified PAs were administered to rodents. Systematic toxicity testing or clinical trials have not been performed. Although PA poisoning in humans can occur, this is most commonly a consequence of consumption of plants other than comfrey [13]. [So this] is probably not an accurate reflection of the risk and/or therapeutic benefit of comfrey in humans (Rode, 2002). However, to"*

- User experiences with regard to comfrey healing bones, tendons, and heavy bruises:
  - **Facebook comment:** *"Broke my foot, had a gap, doc said requires surgery & pin. Friend brought comfrey, mashed roots in food processor, poultice, fused my bones, healed well, no scars."*
  - **Facebook comment:** *"I tore a tendon in my finger. It just wasn't healing well so I started using my comfrey on it under the bandage. It almost immediately got so much better."*
  - **Facebook comment:** *"I healed my broken wrist with Comfrey, using external packs. Hospital was out of the question as we live off grid and Covid had everything shut down."*
  - **YouTube comment:** *"Comfrey poultice 3 times a day for 4 weeks has repaired my torn shoulder. Normally it takes 4-6 months the to heal."*
  - **YouTube comment:** *"I had a serious neck sprain that made me miss 2 months of work. the only way i survived was to use comfrey. 10 minutes after applying it, the extreme pain would*

totally go away. the pain reduction alone is worth using it, but quicker healing is a great bonus. i wouldn't use anything else."

- **YouTube comment:** *"My Good friend made homemade remedy of comfry exactly what he said been putting it on my dog who limps because of his leg not working right, fully recovers it!"*
- **Facebook comment:** *"Comfrey ointment does heal bones and tendons. I have witnessed many instances of this and it's my go-to for injuries. It shouldn't be applied to broken skin. I use dried leaves steeped in olive oil for two weeks, then strained. I add 5% melted bees wax to the oil to set it into ointment."*
- **YouTube comment:** *"Comfrey poultice 3 times a day for 4 weeks has repaired my torn shoulder. Normally it takes 4-6 months the to heal."*
- **YouTube comment:** *"I used it on a very badly strained muscles and black bruises on my ankle and foot, stretched legaments too, i piked leaves and banged them with a tenderizing hamer to get the juices flowing, then began to wrap them around my ankle and foot and put a sock over it all for the night, and i couldnt believe it my bruising was allready dissapearing i mean it was almost gone so i kept doing i, and what should have taken weeks and even physio theropy was pretty much healed in less than a week! it was bad so it took a few months for all the pain to go away, but hey i was walking on it withing a couple days!"*
- **YouTube comment:** *"Comfrey is an amazing healing plant. It has healed me a few times from badly injured ankles. Wouldn't be without a patch of it. Makes good tea also."*
- **YouTube comment:** *"Works! Healed my collar bone that had completely snapped right off! Physician said I'd probably have to have it pinned! Made a poultice with cling film over it and a bandage, and it knitted together and had healed so much in a few days ! Physician was amazed and said it looked great!"*
- **YouTube comment:** *"My husband had swelled knee and behind the knee. He had surgery on the other knee for torn meniscus. I used powederd comfrey with water as a poultice 3 days later all cured. Never hurt again"*
- **YouTube comment:** *"I suffered for nine months with a sprained knee; comfrey cream cured my knee in 48 hours!"*
- **Facebook comment:** *"Snapped my leg 6 places in a bike accident a woman put me on comfrey. Bar on a partial points cover riding again a month later."*
- **Facebook comment:** *"I have comfrey in my yard and were I live we have elk in the wild, they are like moose in size and the elk got injured some how are he broke into my garden and he ate every comfrey plant to the ground every time it grew back so I believe he was healing him self."*

- **Facebook comment:** *"Was the skin broken [when your hand swole due to comfrey use]?? If you have any debris or bacteria in the open wound then the comfrey heals so fast it will trap stuff in there and cause infection."*
- **Facebook comment:** *"I have used knit bone to knit bones for 50 yrs it works very well because of the enzymes in it. These enzymes will destroy your liver and kill you slowly if you eat it. Do not eat comfy."*
- **Facebook comment:** *"It helped with my painful knees!!!!"*
- **Facebook comment:** *"It is fantastic made into a tea, left to cool then put in a jug and poured over sore area, stitches or tears after childbirth."*
- **Facebook comment:** *"I use a cream made of it. Great for knee pain and muscle pain. Any mild pain (coming from someone with back pain daily but also has acute abdominal pain due to Endometriosis)"*
- **YouTube comment:** *"I was pounding a ground rod in the other day and missed the rod, slamming the post pounder onto my big toe. I don't believe it was broken, but it sure was smashed! I put on a comfrey salve (made from a recipe just like this) and even though the expected horrific bruise came out, by the second day most of the pain was gone and the bruising is going away fast."*
- **Facebook comment:** *"Soak a leaf in some hot water to soften it and wrap a bruised or broken bone with the leaf. It actually mended my broken wrist! Knitbone its often called. Its FUN to grow & medicinal to the MAX!"*
- **Facebook comment:** *"Battered deep-fried comfrey leaves are delicious and have used many times on wounds, its great."*
- **Facebook comment:** *"My daughter injured her foot falling from a tree several years ago. She said it did not hurt much but swelled and bruised. She hobbled on crutches for a bit and it seemed to heal just fine. But it has started hurting now! We've been growing comfrey for a few years and are going to try this. I will make a tea to soak in and then a poultice for every day use (making it fresh each time). I'll try and let you know how she does!!*

  [UPDATE:] A little feedback. It's been 2 months of consistent application of the comfrey and her ankle is better! It took some time but I attribute that to it being an old wound."
- **YouTube comment:** *"Myself and a dear friend both use comfrey salve daily ,I no longer take morphine for my back pain and I have a stock pile of comfrey salve for us both .I highly recommend this to anyone who is in pain."*

- **YouTube comment:** *"Comfrey root oil gave me back my ability to pray on my knees again, the pain was like electricity up my legs. The key is twice minimum daily use and now today 4 years later I only use it 2 to 3 times per week once a day..."*
- **YouTube comment:** *"I used this on a dog's suspicious lump near her toes...we covered with salve and a bandage..we checked two days later and it had started to dissolve the Lump..we repeated again and next time we checked it had nearly disappeared..after a week there was no sign of what ended up being some sort of tumour 😊 "*
- **Facebook comment:** *"Comfrey is amazing. I dropped a concrete stepping stone on my big toe. No shoe. I was convinced it was broken. I wrapped a comfrey leaf around my toe and taped it up. Left it on for 2 hours. I went to bed and it the morning there was hardly any pain and my toe could bend with no trouble."*
- **YouTube comment:** *"17 years ago, my son fractured his collarbone and could not sleep at night because of the pain. I brought some comfrey root powder, mixed it with oil (I think it was vegetable oil but cannot remember what kind because it was long time ago), made a salve and gentle put a layer on the fractured area, cover with cloth. To my amazement, he was pain free within half hour then was asleep soon after. Earlier this year, our dog injured one of her front legs so she could not touch it on the ground, soon one of her back legs gave out, so she could not walk at all. Move a 70 lb dog to do her daily business was no fun. Watching her suffer was even worse. After a few days of tried all kinds of natural remedies and waited for them to work without much success, I finally remembered the comfrey root powder I kept all these years. This time I mixed it with some castor oil to make a salve, rub on her front leg, her back hip and around her bag leg that could not stand on its own. I had doubt because the salve was rubbed on hairs and furs and that powder kept in a bag inside a jar in a pantry at room temperature was more than 17 years old. To my amazement, the next day she seemed much better, which means her mobility was coming back, though trying and slow. I applied again the next couple of days. By forth day, she was back to her old self. I also read that coconut oil could really help hip dysplasia, so I gave her some coconut oil too. But the remedy that made the most significant improvement was the comfrey root powder salve. Thank you for sharing your amazing experience with us."*
- **YouTube comment:** *"This [comfrey] poultice works like magic, I used it on my husband sprain arm and the next 2 days he was using his arms like nothing ever happened, before the poultice he could not raise his hand."*

- User experiences the airways and other random issues:
  - **Facebook comment:** *"I would take it as a blended drink for severe bronchial asthma as a child ... worked a treat."*
  - **Facebook comment:** *"My mum used to grow it and make a tea for me to drink at night time before sleep. It helped tremendously with my bronchial asthma. Thanks mum. 🙏"*
  - **Facebook comment:** *"Hornets were all over my hands; stinging. owww! I imediately ran to the back yard to the comfrey and took some leaves and squished them in my hands and placed the leaves upon my hands and wrists. Immediatley, the stinging was relieved. and virtually now swelling. I repeated this later in the evening and the comfrey relieved pain and itching. wonderful and a beautiful plant. and the leaves are great for mulch over garden beds."*
  - **Facebook comment:** *"[I] had a skin condition on one of my hands, suspect from sunburn, the Dr's could not cure it with all their prescription ointments put comfrey salve on healed within 2 days never came back"*
  - **Facebook comment:** *"Native women digest it to get rid of unwanted pregnancy. If you chew it, it will cause a massive white blood cell bloom and it can reverse an abscess tooth. Spit out the juice from chewing it. Do not swallow."*
  - **Facebook comment:** *"Very good for deworming goats."*
  - **Facebook comment:** *"My sister has diabetes and keeps getting her fingers amputated because of infection etc ..she was seeing a specialist and he booked her in for another amputation..I made some comfrey salve and she applied it around 4 times a day..within 10 days this abcessed finger was healed.."*
  - **YouTube comment:** *"I had bad eye allergies last week - rubbed them too much and think one ended up infected - woke up it was swollen and eyelid all red and painful. My mom sent me this video and I immediately picked and blended comfrey leaves. Spread the gelatinous glob on my closed eye, lay down and let it sit there for 30 minutes. Felt soothed. Next day eye is all healed! Only other thing I did was rinse with saline."*
  - **YouTube comment:** *"Several years I got kicked in the leg by our bull right below the knee. It re-arranged my vericose veins and of course caused thrombosis and hurt like heck. I hobbled out to the comfrey patch, picked a gob, brought it to kitchen, beat to a pulp, slathered it on wet towel and put on leg while I reclined on couch. Changed the mash as necessary for a couple days. Totally healed up the vericose veins!"*
  - **YouTube comment:** *"I have DVT [deep vein thrombosis]. One of the side effects is festering and oozing of the skin. Really ugly. The prescribed treatment is zinc oxide wrap. That is a mess as*

well. After 2 years of this I reasoned there was nothing to lose by doing something else. I prepared a comfrey salve. Applied twice a day initially. Within a week the oozing had stopped. By week two the redness had disapated. Now I treat once in the morning. No problem since. My testimony to the value of this plant."

- YouTube comment: *"I used it when I have a sty on my eyelids. I promise you this works. I put leaf or two in hot water and let it steep. When it's warm enough I then take the leaf and place it on my eye for about ten minutes. I repeat the process until the water gets cool. It will give you relief almost immediately. The sty will disappear within 24 hours."*
- YouTube comment: *"My grandmother used this same method to cure a similar eye injury on dad as a kid. The old ways are still the best!"*
- YouTube comment: *"I used your poultice on my husbands burns from smithing. 2 days is all it took for a wound that was festering for months that standard antibiotics didn't even touch. 2 days and he's 80% healed or better. He heals slow due to borderline diabetes. I'm simply amazed, and this comfrey grows all over my back yard. Didn't think that the old way of medicine could help..."*
- YouTube comment: *"My Dad made a poluce on his friends gangrene foot kept it wrapped for couple of days gangrene gone the doctor was amazed!"*
- YouTube comment: *"As a wildlife tech, I'm exposed to alot of hazards. I've been using comfrey for everything from bug bites, scrapes, poison ivy blisters, and sun burns. It even healed a super stubborn cartilage piercing that refused to heal on its own (mostly coz i kept snagging it on things accidentally!) I swear on this stuff, it's amazing."*
- YouTube channel 'Health And Homestead' testimony by Sofia: *"[At] a group Bible study at the church... a lady was sharing with us that her husband was having a lot of pain. He was in a wheelchair, he could not walk, and his pain medications just weren't working anymore. So, I had some of the comfrey salve in my bag, so we gave it to her and told her to put it on her husband's hip three times a day. So, she did that. [Days later] she said that he had stood up for the first time in two months. ... We told her, keep putting it on three times a day. A week later, we saw them, and he was walking... Kind of weak, but he was still doing it. Then, a week and a half later, we saw him again, and he was confidently walking, and he has not needed to go in a wheelchair since. ...*
  There was a lady who wrote us and said that she had frostbite in her feet really bad 20 years before, and there was still

recurring pain that she didn't know how to get rid of. So she ordered some of my comfrey salve, I shipped it to her, and she had regularly put it on and told us that the pain had left, and she had been relieved after 20 years of pain. ...

[Another man] was excited to buy some and try it out. Next time I saw him it was a few months later. He told me that he had been regularly putting comfrey salve on his legs where he had varicose vein problems and that he was going to need surgery for. But he told me that the comfrey salve had taken his varicose veins and shrunken them so he did not need surgery anymore and there was no pain left. ... The person next to us who had also his booth had a sprained ankle and he had to stand there so the pain was getting kind of bad so he had to sit down most of the time. Well he came over and bought some comfrey salve for me and he told us later that day that his ankle was not hurting so bad so he could stand at his booth and walk...

This is something that just happened within the last week: Our neighbor came up and he told us that he had a torn cartilage in his knee so we gave him some comfrey salve and within 24 hours his cousin was at our door asking for some comfrey salve for her mother because her cousin had been doing so much better within 24 hours."

- Facebook comment: *"The root is most powerful. I have used this great plant for many years. It is great for burns and inflammation. A lady I worked with in Africa, where it grows wild in her area, said that I saved her relatives life after I taught her how to dry, process and use it properly. [I'm a] Physician, Doctor of Nutrition."*
- YouTube comment: *"It healed me of stomach ulcers. I used to mix it with aloe vera and drunk on an empty stomach, half an hour before meals."*
- Amazon review about comfrey oil: *"As a fibromyalgia sufferer I am in constant pain. However, if I add a few drops of comfry oil to some Vic vapour rub, the paste will be perfect for rubbing on to hurting muscles to ease the pain. Try it, it really does work!"*
- Amazon review about comfrey salve (with more alcohol than comfrey in it btw): *"This product is perfect for me. It keeps my frequent knee pain very well under control. I'm talking about gout attacks and similar issues. THANK YOU!"*

Coneflowers

- Flowering plants in the daisy family, the official name being Echinacea.
- Thought to reduced the risk of respiratory infections as influenza, although this position still is controversial.
  - Jan. 2000, no. 1, Journal of the National Medical Association, 'A strategic call to utilize Echinacea-garlic in flu-cold seasons.' (Arab author working in Florida, with Synergy Nutritional Industries backing the study in some form): *"Anecdotal and growing scientific data about the herbs, garlic and Echinacea, suggest that the administration of herbal preparations ... should be part of any international planning to prevent virulent seasonal and pandemic strains of the flu. ...*
    Many who had worked with cold-flu patients through several seasons gave impressive accounts that they had never had an acute upperrespiratory tract infection [while using the below two garlic and coneflower therapies]. ...
    How did these health providers administer these two herbs for the prophylaxis and cure of the common cold and influenza? They relayed to me that ... in its crude or raw form, Echinacea was administered orally with a cup of tea sweetened with honey or unsweetened once daily for prophylaxis and twice daily for cure. ... [Garlic is smelled and then chewed with honey for a while before being swallowed.]"

Cranberries

- Cranberry juice is strongly anti-microbial by itself, but this characteristic can be enhanced by certain combinations.
- Studies:
  - Oregano oil, similar to Cranberry juice and certainly a respective 25%/75% mix of the two, can inhibit Helicobacter Pylori. Pure Cranberry juice is almost as effective against Helicobacter Pylori as the 25%/75% mix though, with pure Oregano oil slightly lagging behind. [67]
- Experiences:
  - **YouTube comment:** *"I had a situation where the sinus and an upper tooth were connected i had no results from antibiotics in fact i had more pain i put cayenne pepper in cranberry juice and drank it felt the germ killing sensations and cleansing the pain and sinus problems stopped after extraction same results after implant same results healing and cleansing."*

Dandelion

- This is the famous yellow flower that eventually turns into this grey fluff ball you see all over grassland in Europe and the U.S. They are part of the sunflower family.
- Every part of the dandelion is edible: flower, roots, stem, and leaves. They contain calcium, magnesium, iron, and vitamins A, C, E and K. Part of the plant turns more bitter once it starts flowering. The flowers are particularly popular in the Italian kitchin, where they're used in soups and traditional tortas.
- Anti-depressant and anti-cancer properties:
  - Nov. 8, 2016, Oncotarget journal, 'Dandelion root extract affects colorectal cancer proliferation and survival through the activation of multiple death signalling pathways': *"Dandelion extracts have been studied extensively in recent years for its anti-depressant and anti-inflammatory activity. Recent work from our lab, with in-vitro systems, shows the anti-cancer potential of an aqueous dandelion root extract (DRE) in several cancer cell models, with no toxicity to non-cancer cells. ... DRE could be a non-toxic and effective anti-cancer alternative, instrumental for reducing the occurrence of cancer cells drug-resistance."*
- Experiences:
  - YouTube comment: *"My hoarse voice that came on suddenly a couple of months after the [cancer] treatment had ended was also fixed by fenbendazole. Fenbendazole is very like the white milk in dandelion stalks, in fact I met a lady recently that cured her cat cancer with dandelion which also cures cancer."*
  - YouTube comment: *"I have continued to improve! I'd suggest drinking two cups of dandelion tea as well everyday (one in the am and at pm)! When I started drinking the tea with the moringa, all of the sudden I start to REALLY improve. I was at a pain level 8-9 almost everyday. Now I'm at a 5."*

DIM

- Diindolylmethane (DIM) is the main anti-cancer and estrogen-lowering compound to be found in cruceferious vegetables. It can be bought in isolated form or as indole-3-carbinol / DIM content:, which breaks down to DIM after ingestion to the tune of 60-67% (so 250mg indole-3-carbinol would provide about 165mg DIM). Indole-3-carbinol / DIM can be extracted in the largest amounts from 3-day-old broccoli and califlower sprouts, which often have anywhere from 5 to sometimes 100x the the amount found in mature plants that can be bought in the supermarket. Reported supermarket concentrations of 20mg per 100g in broccolistill are not bad though,

as plenty of people can't handle more than 75mg before side-effects show up related to low-estrogen: headaches, depression, and drying out of joints. In any case, there is a ton a variance among cultivator brands, so for consistent levels it might be best to buy supplements.

- July 2010 study: *"Very low doses of DIM [100mg] as found as a component of foods with the necessary cofactors works in the gut and liver to manipulate estrogen detox and support healthy estrogen metabolite ratios to prevent estrogen dominance. ... Indole-3-carbinol was studied extensively and found to be effective and beneficial for cancers but was shown to be very unstable [in that it mainly converts to DIM]. DIM was found to be more stable and more suitable for use in supplements. ... Indole-3-carbinol (I3C) I3C is a labile compound in vitro, which readily rearranges to DIM, linear trimer (LTR), cyclic trimer (CTR), indoloc carbazole and other oligomers under acidic conditions ... in the stomach. ... Greater than 50% dimerization of I3C into DIM occurred in 24 hours. At 48 hour, greater than 60% conversion was found. With 60% conversion, approximately 2/3 of the I3C will be converted to DIM. ... I3C condenses into DIM at a ratio of 2:1... After 24 hours of incubation, at least 50% of the I3C initially added was converted to DIM. ... At the earliest time evaluated (24 hours) the extent of conversion of I3C to DIM was above 50%...The quantitative measurements indicate ... at least a 60% conversion of I3C to DIM (Tables III and IV)."*
- hongdanaturals.com/info/how-much-indole-3-carbinol-in-broccoli-88861738.html (accessed: April 26, 2024): *"One 2009 study analyzed three broccoli cultivars and found I3C concentrations ranging from 75-121 mg per 100 g fresh weight. The levels were highest in the green Magic cultivar compared to the Beneforté and Lucullus varieties. Another study detected around 20 mg I3C per 100 g [5x lower] in standard broccoli heads purchased from a market."*
- Sep. 16, 1997, Proceedings of the National Academy of Sciences, 'Broccoli sprouts: An exceptionally rich source of inducers of enzymes that protect against chemical carcinogens': *"Extracts of 3-day-old broccoli sprouts ... were highly effective in reducing the incidence, multiplicity, and rate of development of mammary tumors in ... rats. ... Unexpectedly, 3-day-old sprouts of cultivars of certain crucifers including broccoli and cauliflower contain 10–100 times higher levels of [indole] glucoraphanin ... than do the corresponding mature plants. ... Whereas inducer activity was high for sprouts of all crucifers examined, it was consistently highest for broccoli and cauliflower cultivars. Three-day-old sprouts of random commercial cultivars of broccoli (n = 26) and cauliflower (n =*

28) produced inducer potencies ranging from 92,500 to 769,000 units/g fr. wt. (mean = 293,000 units/g fr. wt.) and from 50,000 to 560,000 units/g fr. wt. (mean = 251,000 units/g fr. wt.), respectively. Repetitive kilogram-scale harvests of 3-day-old broccoli (cultivar SAGA) sprouts yielded an average of 511,000 units/g fr. wt. (n = 14). ...

Although the indole glucosinolate composition varied considerably among cultivars and even among different samples of the same cultivar, indole glucosinolates accounted, on average, for 67% of the total glucosinolates in extracts prepared from 7 broccoli cultivars (DeCicco, Emperor, Everest, Excelsior, Green Comet, Green Valiant, and SAGA). In contrast, in most 3-day-old broccoli and cauliflower sprouts and seeds (>70 cultivars examined), less than 10% of total glucosinolates were indoles, and in many cultivars none could be detected (Fig. (Fig.4).4)."

- It appears cooking doesn't destroy much of the indole-3-carbinol / DIM content:
  - February 27, 2009, ACS Publications, 'Effect of Boiling on the Content of Ascorbigen, Indole-3-carbinol, Indole-3-acetonitrile, and 3,3 '-Diindolylmethane in Fermented Cabbage': *"After 10 min of boiling, the content of free indole-3-carbinol and indole-3-acetonitrile stabilized at the level of about 80% as compared to the uncooked cabbage."*
- People often take 100-200mg a day of DIM. Some avoid the side effects by going down to 75mg, while others, often steroid users, do fine on 400mg a day.
- Similar to vitamin B (B6 in particular) or NAC, DIM can serve as a powerful anti-estrogen inhibitor. It suppresses 17-beta-estradiol (E2), which is the strongest estrogen in the human body. The estrogen lowering aspects are so potent, that many moderate steroid / TRT users (120-160mg testosterone cypionate, for example, and nothing else is mild, with high estrogen effects showing up above that, anywhere from around 160mg to 400mg a week) can use DIM as a natural replacement of anastrozole (Arimidex). To aid the liver in breaking down all this estrogen, NAC can be used. Experiences:
  - **Reddit comment:** *"Hold off on the Anastrozole until you start getting estro sides, 200mg is standard in most clinics, I'm on 200 a week I take dim instead of Anastrozole to control any excess estrogen and I feel great being on trt for almost a year now!"*
  - **Reddit comment:** *"[DIM] works for me. 500mg once a day [note: very high dose!] for 3 months. E2 dropped by 60 (from 210 to 150)."*

- **Reddit comment:** *"I legit got ED [estrogen deficiency] from 300mg Dim. I found 100mg-200mg every night is enough for me, anymore and I think my E2 goes too low."*
- **Reddit comment:** *"Lowered my e2 50 down to 40 using DIM [with] 400mg per day."*
- **Reddit comment:** *"Just got my results back, in January before dim my estrogen was 206 pmol/l, which is y I started dim, my recent blood work shows ny estrogen to be 100 so half of what it was, but my free testosterone and total is crazy high, free testosterone is 22.1 nmol/l on a range of 0.2 - 0.62 total testosterone of 520 nmol/l range 8.6-29.*
  Im only taking 125mg of testosterone per week split Mon wed Friday, in January I was taking 140mg and my testosterone was sitting perfectly, so it doesn't make sense that I've reduced my dose a little and my bloods are off the charts, I thought it was a mistake so got retested and they cone back the same, I take no other medication and blood was drawn on Monday with my previous injection being the Friday.
  I'm thinking it has to be the dim messing with the blood test somehow, anyone got experience with this? Thanks."
- **Reddit comment:** *"It makes me piss amber/orange. Anyone else have that effect?"* **Reddit reply:** *"Yup right here."*
- **Reddit comment:** *"Yeah it did, [after taking DIM] I felt my libido go up after about a week and my face wasn't as oily, im getting blood work done in 4 weeks so I'll find out what the numbers say. ... It says 500mg on the front, the brand is body genix."*
- **Reddit comment:** *"I personally had a bad experience with 3-indole carbinol which converts to DIM in the body. After about a week in, my testosterone levels tanked for a month. There's no evidence that it lowers testosterone but damn I won't be touching that stuff again."*
- **Reddit comment:** *"DIM works for sure. It's not as strong as Anastrozole, but if your estrogen is just slightly high, it works well. I've used it for years. I used to take Anastrozole but dropped my dose of testosterone, and now the Anastrozole is too much, but I still need something for estrogen. That's where DIM helped. It's great. Just 200mg a day."*
- **Reddit comment:** *"I now take 200mg DIM a day, in one pill that contains nothing else. [It] keeps my nipples feeling normal."*
- **Reddit comment:** *"Flax seeds combined with low dosage tadalafil 2.5mg 3-4 times a week worked better for me than DIM."*
- **Reddit comment:** *"Dim was ok at regulating estrogen at the start of my test cycles / trt. After a couple months of use I had a whole list of dry/joint problems and thought it was from over*

working myself. After stopping dim joint dryness/pain went away."

- **Reddit comment:** *"I reduced my e2 from 52 to 32 in 3 months with 100mg DIM + 1000mg CDG [Calcium-D-Glucarate] per day. But, 200mg gave me significant bloating that went away on cutting back to 100mg. Tried it 2-3 times for 3-4 days. I wasn't (still not) using any peds Or trts."*
- **Reddit comment:** *"Tried it...for a while. DID. NOT. HELP!!!! IDK what dim is supposed to do, but it didn't do it for me. not even close. I take anastrozole and it works great."*

- DIM is used to reduce acne, which also has been useful to steroid/TRT-using bodybuilders:
  - **YouTube comment:** *"I've been taking DIM 100mg a day for 7 months and it cleared up my acne, also reduced my estradiol from 62 to 45ish. The craziest part is now [with TRT injections] I'm only on 75mg/week 2x a week and my last test numbers were 1042."*
  - **YouTube comment:** *"Here's my experience of using DIM while on TRT: A dramatic reduction in acne side effects. That's it. When [I] stop using Dim acne side effects returned."*
  - **YouTube comment:** *"Dim at 200mg daily for a year gave me joint pain and I never really felt energetic on it.. " [Answer:] "It was too much... try 100mg.. if that's too much just keep going down.. I had the same problem as u.. 75mg is my ideal dose."*
  - **Reddit comment:** *"Okay, I'm going on record to say this: DIM has almost completely knocked out my bacne [back acne]. Basically I've been on a TRT dose of test (self admin) for the last year, and I've only blasted test a couple times before that. My acne had gotten out of control this last year and it got so bad on my back and shoulders I wouldn't even wear a tank top anymore. My friend was in a similar boat and he told me about DIM a couple months ago and now it's basically cured his bacne, I've been taking it almost a month now and I can safely say it has gone down about 90% and now the scars are starting to slowly get better it seems (thank god). So I take 200mg 2x day and it's been working great. I have tried Aromasin and Armidex but I am very sensitive to AIs it seems and when I got my bloods done my e2 was barley in the high range. So I hope this helps anybody struggling with acne... I was seriously about to get on Accutane but I'm SO glad I tried this first. ...*
    Oh yes and my cruise dose is 175mg test/wk, no AI."

Ficin

- Protein-digesting enzyme extracted from fig trees, that is being studied for anything from wound healing to anti-biofilm properties.
- It is listed here, without any additional research having been done, because one Taiwanese study that provided a mixed bromelain, papain-ficin mix reported a major decline in eye floaters among test subjects after 6 months. Castor oil might be a better first try though to get rid of eye floaters.

Ginkgo biloba

- Tree from East Asia that has been cultivated by humans for thousands of years. The oldest known Ginkgo Biloba tree is estimated to be 3,500 years old.
- Health benefits tied to ginkgo supplements mainly involve an improvement in concentration and memory, a lessening of tensions, a reduction in tinnitus (albeit likely more effective for stress-tied tinnitus than hearing damage-tied tinnitus), and an increase in blood flow (also to the penis):
- Considering a lot of people also talk about ginkgo causing panic attacks, depression, and aggression, it certainly seem it influences people emotions, one way or another.
- Experiences:
  - **Reddit comment:** *"I took gingko for a while before my [ADHD] diagnosis and it seemed to help. To the point where other people noticed if I forgot to take them. The effects were small in comparison to that of stimulants, but at that point even a small boost in concentration was amazing."*
  - **Reddit comment:** *"First day, I took it [due to long Covid] and then forgot about it until about an hour later when I felt a dull headache inside my forehead and a clearing sensation of the brainfog. Have been taking it almost daily since and I am amazed by how much it has improved everything. Before, I had this weird kind of brainfog, nonexistent motivation, memory issues, linguistic-cognitive dysfunction, and I genuinely felt as if I was developing some kind of dementia and that y had dropped like 50 in IQ. This all started after I got covid during the spring of 2023. Now I feel like myself again, I get no brainfog or brain fatigue, my creativity is back and I can handle school waay better, my memory is improved (albeit some longterm memories are gone), and I've regained a lust for life and motivation."*
  - **Reddit comment:** *"I take ginkgo for its powerful antioxidant effect. I also found a long time back that it invokes/activates DNA repair enzymes, which is a big plus. It has some efficacy in keeping the erections and libido at 'teenage level', again can be*

attributed to circulation improvements but libido increase, that can't alone be due to circulation. Increases my jogging endurance, shortens recovery time and reduces fatigue. Suppresses prolactin and clears bad estrogen as well."

- **Reddit comment:** *"Lions mane is real good to me. Ginkgo has been good as well. If I was to choose just one i'd pick lions mane, which is the one I take more frequently, only to use Ginkgo here and there as a booster. Also, keep in mind Ginkgo has levels of toxicity, and there are reports of harmful effects on the body."*
- **Reddit comment:** *"I took Ginko for memory to study and it made me increasingly focused driven more obsessive over what I need to get done and if anyone got in my way I became agitated and angry. Increased alot of negative talk as well. Its can be addictive and increased anger and mood swings. I suppose everyone is different. This were the effects on me."*
- **Reddit comment:** *"It took at least a month for me to notice anything. Probably the biggest improvement I noticed was stiffer erections. I'm guessing it also helped with cognition, but the erections were more noticeable."*
- **Reddit comment:** *"Took ginko biloba and ginseng supplements for a week. Been having mood swings, agitation and uncontrollable anger. Had to stop it because it wasn't helping. Im taking anti-depressants."*
- **Reddit comment:** *"I've heard it can help blood flow and tinnitus. At least one person I've heard it helped with tinnitus."*
- **Amazon review:** *"I was prescribed Ginkgobiloba 120 mg for my stress-related tinnitus. I received a private prescription from my ear doctor. I nearly fainted at the pharmacy. 30 tablets for over 30 euros. Two tablets a day, enough for 15 days. Anyway, I took them. Then I found these tablets on Amazon, and they completely met my expectations. Actually, they even exceeded them. I only get tinnitus very rarely now. The price is unbeatable."*
- **Facebook comment:** *"Ginkgo biloba pills help a lot with tinnitus."*

Grapefruit juice and seed extract

- Grapefruit juice mixed with antibiotics and other medicines tends to be a dicy mix. Be very careful here. Grapefruit contains furanocoumarins, which block the CYP3A4 enzyme in the gut that normally breaks down many medications. An additional problem is

that one glass of grapefruit juice of about 200–250 ml can inhibit CYP3A4 enzyme for up to 72 hours, i.e. 3 full days.

- The (white inner) peel of citrus fruits contains high levels of pectin, a soluble fiber and prebiotic.
- Grapefruit juice is often promoted as a cure for candida, any type of gut imbalance, and urinary tract infection. It can also be used as a topical antibacterial. Both grapefruit juice and grapefruit seed extract are potently anti-microbial, the former possibly the most, although it could be maximally effective against different types of bacteria. Studies:
  - May 10, 2019, Journal of Microbiology and Biotechnology, 'Anti-Biofilm Activity of Grapefruit Seed Extract against Staphylococcus aureus and Escherichia coli': *"Grapefruit seed extract (GSE) is a safe and effective preservative that is used widely in the food industry. ... The GSE [Grapefruit seed extract] minimum inhibitory concentration (MIC) for S. aureus and E. coli were 25 μg/ml [0.025 mg/ml] and 250 μg/ml [0.25mg/ml], respectively. ... Our results suggest that GSE might be used as an anti-biofilm agent that is effective against S. aureus and E. coli."*
  - July 5, 2004, no. 3, Journal of Alternative and Complementary Medicine, 'The Effectiveness of Processed Grapefruit-Seed Extract as An Antibacterial Agent: I. An In Vitro Agar Assay': *"Sixty-seven (67) distinct biotypes were tested for their susceptibilities to the GSE as well as to 5 other topical antibacterials (Silvadene,® Sulfamylon,® Bactroban,® Nitrofurazone,® and Silvadene,® Nystatin). ... Conclusions: Our preliminary data thus suggest an antibacterial characteristic to GSE that is comparable to that of proven topical antibacterials. Although the GSE appeared to have a somewhat greater inhibitory effect on gram-positive organisms than on gram-negative organisms, its comparative effectiveness against a wide range of bacterial biotypes is significant."*
  - 2015, no. 6, Journal of Basic Medical Sciences (University of Lagos, Nigeria), 'Antimicrobial Activity of Grapefruit (Citrusparadisi) Seed Extract and Juice Against BacteriaAssociated with Urinary Tract Infections': *"Methods: Antibacterial activity of both the grapefruit seed extract and juice was therefore evaluated against one hundred bacteria isolated from the urine of patients presenting with urinary tract infections... Results: ... Grapefruit juice was more active than the seed extract with minimum inhibitory concentrations [MICs] between 12.875 and 51.5 mg/ml against 99% of the [bacterial] isolates and 12.5 and 50 mg/ml against 45% of the isolates for juice and seed extract respectively. ... Conclusion: ...*

This study suggest that both the grapefruit seed and juice possess antibacterial activity which may be responsible for the reported use in the treatment of urinary tract infections."

- Antiviral and anti-fungal studies on grapefruit juice and seed extract demonstrate it works against Covid-19, influenza (flu) and other viruses:
  - Feb. 2019, Journal of Veterinary Medical Science, 'Inhibitory effect of grapefruit seed extract (GSE) on avian pathogens': *"GSE×100 reduced the viral titer of both AIV [avian influenza virus] and NDV [Newcastle disease virus] even in 5% FBS [fetal bovine serum] condition. IBDV [infectious bursal disease virus] showed high resistance to GSE. GSE×1,000 inactivated both SI [Salmonella Infantis] and EC [E. coli] within 5 sec, even in the presence of 5% FBS. The disinfectant was able to maintain its efficacy in the spray form at 30 cm distance. GSE was also effective against SI [Salmonella] and EC [E. coli] inoculated on fabric. GSE is a potential novel disinfectant against viruses and bacteria, effective even within a short contact time."*
  - 2003, issue 4, Journal of the European Academy of Dermatology & Venereology, p. 486, 'Antifungal activity of 33% grapefruit–water glycerol solution': *"Grapefruit seed extract was originally developed by the German physicist and immunologist, Dr Jacob Harish, as an antiparasitic agent. Tests conducted by the United States Department of Agriculture (USDA) in the early 1980s confirmed that cricidal, as it was then called, was effective in inhibiting viral strains in cattle and dogs, and was approved for use by the USDA Evian Influenza Eradication Programme in 1984. Exposure to grape-water glycerol solution inhibited the enzymatic activity of five enzymes in Candida albicans. The grapefruit juice components dihydroxybergamottin and bergamottin may become candidates of multidrug resistance reversing agents in cancer chemotherapy. 33% grapefruit-water glycerol solution exerted potent antifungal activity against the yeast-like fungi strains and lowered activity against dermatophytes and molds."*
  - Nov. 25, 2020. Biorxiv.org, 'A Nasal Spray Solution of Grapefruit Seed Extract plus Xylitol Displays Virucidal Activity Against SARS-Cov-2 In Vitro': *"A commercially available nasal spray (Xlear) combining xylitol and GSE has been available for years, but the antiviral effects of this solution have not been documented. This in vitro study examined the virucidal effect of Xlear against SARS-CoV-2. ... When tested against SARS-CoV-2, the test compound GSE 0.2% was the only compound effective at reducing >3 log10 CCID50 infectious virus from, 3.67 log10 CCID50/0.1 mL to an undetectable amount of infectious*

virus. The present results validated by two independent sets of experiments, performed by different labs, on different viral strains, provide early evidence to encourage further pilot and clinical studies aimed at investigating the use of Xlear as a potential treatment for COVID-19. ...

bioRxiv and medRxiv thank the following for their generous financial support: The Chan Zuckerberg Initiative, Cold Spring Harbor Laboratory, the Sergey Brin Family Foundation, California Institute of Technology, Centre National de la Recherche Scientifique, Fred Hutchinson Cancer Center, Imperial College London, Massachusetts Institute of Technology, Stanford University, The University of Edinburgh, University of Washington, and Vrije Universiteit Amsterdam."

- Personal experiences:
  - **Reddit comment:** *"Try grapefruit seed extract if you can do grapefruit, I had a chronic yeast infection issue for awhile (genetic) and daily GFSE has cleared it up to the point where I could put bread back into my diet and occasionally enjoy a beer."*

Honey

- Any health benefits here are attributed to raw, natural honey (especially manuka honey); not heated, processed honey. Raw, natural honey is opaque beige that doesn't flow all that easily. Processed honey is translucent bright yellow, and with considerably higher viscosity (more liquid).
- Largely unresearched here as of yet, but many people swear by it for health, wound healing, and pain relief benefits.
- Experiences:
  - **YouTube comment:** *"Raw Natural Honey is the best pain reliever out there for the blisters.. Ask me how I know this."*
  - **YouTube comment:** *"Double on the honey [for little wounds]. Especially Manuka. Works great for children and pets too."*
  - **YouTube comment:** *"I use honey on wounds, especially if they get infected. Just a little bit, and then bandage over it. ... I get raw honey from a beekeeper. All the studies use Manuka honey, but I don't find it's necessary."*
  - **YouTube comment:** *"If you can get some comfrey, burdock, or plantain leaves, steam them and wrap the [injured] toe in them. If castor oil is all you have, it doesn't hurt to try it. Manuka honey is a game changer, you can probably get a little bit of it cheap on Amazon, will probably have the irritation or potential infection out of it in less than three days. Take vitamin c or try to get a lot in your diet. Take astragalus also. Once it's closed*

up, some witch hazel rubbed around it will help. While you're healing, avoid sugar like the plague, it will feed any bad bacteria that want to grow in there. ... If you have nothing else, [eating] garlic and ginger will go a long way [to stop or kill an infection]."

- Honey seems to help in removing heavy metals from the body:
  - 2023, issue 2, Journal of Environmental Pathology, Toxicology and Oncology, 'Honey Can Obviate Heavy Metal Toxicity: A Review', pp. 93-99: *"Typical chelating/complexing agents are not worthy of combating heavy metal-induced sub-chronic and chronic toxicities. ... There is a total of 19 pre-clinical works demonstrating the ameliorative [i.e. improving] effect of honey against empirical As, Cd, and Pb toxicity."*

L-carnitine

- Amino acid that transports fat into the mitochondria - the engine - of all human cells, to make ATP.
- Used by people to continue losing weight, have more energy, or better recovery. Gives more energy and helps remove free radicals due to the burning of fatty acids.
- It is also taken to protect the heart, whose cells have more than double the mitochondria, which for 90% burn fatty acids and only for 10% glucose.
- Experiences:
  - YouTube comment: *"I always use L-carnitine when I'm trying to lose fat. Nothing has ever worked so well. I think the injections or infusions work best. Acetyl l carnitine is amazing for energy and mental stamina. If you combine B5 and acetyl l carnitine it works to reduce acne."*
  - YouTube comment: *"After just 2 days of [L-carnitine] treatment, my panic attacks, lethargy and sinus tachycardia have disappeared. My heart rate went from 105 resting to 79. Amazing amino acid."*
- Acetyl L-Carnitine: Can cross the blood-brain barrier. Really helps decrease cognitive decline, reducing chances of Alzheimer and even brain fog from Lyme disease. Acetyl L-Carnitine converts easier to L-Carnitine than vice versa.

Lemon juice

- Unresearched as of yet, but many people swear by it for health benefits.

- Experiences:
  - **YouTube comment:** *"When using garlic in a recipe; chop fine, add fresh lemon juice leave for 10 minutes and add in the last minute of cooking to your food. This enhances the allicin and sulphur compounds..."*

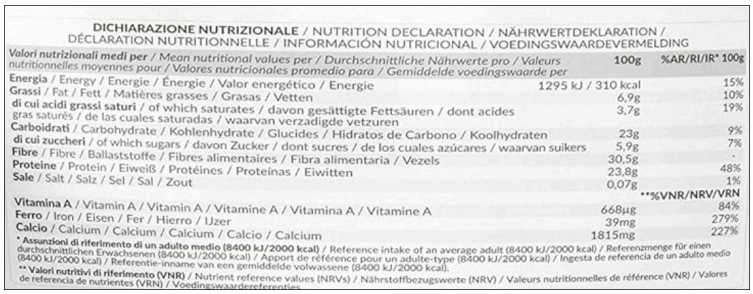
Mastic gum

- This gum is made from dried resin from a special variety of the mastic tree that only grows in the south of Chios, a Greek island in front of the Turkish coast; and Cesme, just across the water in Turkey. The reason the resin is only released by mastic trees here seems to be due to climate and soil factors. It is only systematically harvested on Chios.
- The resin can be chewed as a gum or bought in supplement form.
- Mastic gum can be used to fight a variety intestinal "bugs", the most important and widely spread being Helicobacter Pylori, which can cause ulcers and potentially even cancer. Studies have shown mastic gum can actually fully eradicate Helicobacter Pylori in people on its own, something that is near impossible by anything besides (very destructive) antibiotics:
  - Dec. 24, 1998, New England Journal of Medicine, 'Mastic Gum Kills Helicobacter pylori': *"Even low doses of mastic gum — 1 mg per day for two weeks — can cure peptic ulcers very rapidly... We have found that mastic is active against Helicobacter pylori, which could explain its therapeutic effect in patients with peptic ulcers. ...*
    The H. pylori strains NCTC 11637 (a standard reference strain) and six fresh clinical isolates (three were sensitive and three were resistant to [the antibiotic] metronidazole) were maintained... [We found that] Mastic killed the H. pylori NCTC 11637 strain and the six clinical isolates (reduction in the viable count by a factor of 1000)..."
  - March 2010, Phytomedicine, 'The effect of mastic gum on Helicobacter pylori: a randomized pilot study': *"Our aim was to study the effect of pure mastic gum on Helicobacter pylori (H. pylori) eradication in patients suffering from an H. pylori infection. Fifty two patients were randomized to receive either:* ***[A:]*** *350mg three times a day (tid) of pure mastic gum for 14 days (Group A),* ***[B:]*** *or 1,05g tid of pure mastic gum (Group B) for 14 days,* ***[C:]*** *or pantoprazole 20mg twice a day (bd) plus pure mastic gum 350mg tid for 14 days (Group C),* ***[D:]*** *or pantoprazole 20mg bd plus amoxicillin 1g bd plus clarithromycin 500mg bd for 10 days (Group D). ...*
    H. pylori eradication was tested by a UBT 5 weeks after

*completion of the eradication regime. Eradication of H. pylori was confirmed in: **[A:]** 4/13 patients in Group A and in **[B:]** 5/13 in Grour B. **[C:]** No patient in Group C achieved eradication whereas **[D:]** 10/13 patients in Group D had a negative UBT. ...*
All patients tolerated mastic gum well and no serious adverse events were reported. Mastic gum has bactericidal activity on H. pylori in vivo."

- Nov. 2023, American Journal of Clinical Pathology, 'Assessing the Efficacy of a Modified Triple Drug Regimen Supplemented with Mastic Gum in the Eradication of Helicobacter pylori Infection': *"Helicobacter pylori (H. pylori) is a bacterium that infects the stomach and small intestine. It is known to be the main cause of gastritis and peptic ulcers. The infection is common worldwide, with a prevalence rate of 50% in many countries. Eradication of H. pylori infection is crucial, as failure to do so can lead to serious complications such as gastric cancer. Treatment for H. pylori infection involves a combination of antibiotics, proton pump inhibitors (PPIs), and bismuth compounds. However, due to the emergence of antibiotic resistance, there is a need for alternative treatments.*
This study had been a randomized controlled trial involving 180 patients with H. pylori infection. The patients had been divided into two groups: Group A received the standard triple-drug regimen (clarithromycin, amoxicillin, and omeprazole), while Group B received the triple-drug regimen along with mastic gum. The treatment duration was 14 days for both groups. ...
This study has investigated the effects of mastic gum on H. pylori infection. In a randomized controlled trial of 180 H. pylori-positive patients, mastic gum was found to be effective in eradicating the bacteria in 83 of 90 patients (92.2%) who received the supplementation Group B received the triple-drug regimen along with mastic gum, compared to only 57 of 90 patients (63.3%) in the group A ($p < 0.001$). Thus, a randomized controlled trial of 90 patients with H. pylori infection found that combination therapy of mastic gum and a triple-drug regimen resulted in a significantly higher eradication rate (92.2%) compared to a triple-drug regimen only (63.3%)."

Moringa



DICHIARAZIONE NUTRIZIONALE / NUTRITION DECLARATION / NÄHRWERTDEKLARATION / DÉCLARATION NUTRITIONNELLE / INFORMACIÓN NUTRICIONAL / VOEDINGSWAARDEVERMELDING

Valori nutrizionali medi per / *Mean nutritional values per* / *Durchschnittliche Nährwerte pro* / *Valeurs nutritionnelles moyennes pour* / *Valores nutricionales promedio para* / *Gemiddelde voedingswaarde per*	100g	%AR/RI/IR* 100g
Energia / Energy / Energie / Énergie / Valor energético / Energie	1295 kJ / 310 kcal	15%
Grassi / Fat / Fett / Matières grasses / Grasas / Vetten	6,9g	10%
di cui acidi grassi saturi / of which saturates / davon gesättigte Fettsäuren / dont acides gras saturés / de las cuales saturadas / waarvan verzadigde vetzuren	3,7g	19%
Carboidrati / Carbohydrate / Kohlenhydrate / Glucides / Hidratos de Carbono / Koolhydraten	23g	9%
di cui zuccheri / of which sugars / davon Zucker / dont sucres / de los cuales azúcares / waarvan suikers	5,9g	7%
Fibre / Fibre / Ballaststoffe / Fibres alimentaires / Fibra alimentaria / Vezels	30,5g	-
Proteine / Protein / Eiweiß / Protéines / Proteínas / Eiwitten	23,8g	48%
Sale / Salt / Salz / Sel / Sal / Zout	0,07g	1%
		***%VNR/NRV/VRN
Vitamina A / Vitamin A / Vitamin A / Vitamine A / Vitamina A / Vitamine A	668µg	84%
Ferro / Iron / Eisen / Fer / Hierro / IJzer	39mg	279%
Calcio / Calcium / Calcium / Calcium / Calcio / Calcium	1815mg	227%

* **Assunzioni di riferimento di un adulto medio (8400 kJ/2000 kcal)** / Reference intake of an average adult (8400 kJ/2000 kcal) / Referenzmenge für einen durchschnittlichen Erwachsenen (8400 kJ/2000 kcal) / Apport de référence pour un adulte-type (8400 kJ/2000 kcal) / Ingesta de referencia de un adulto medio (8400 kJ/2000 kcal) / Referentie-inname van een gemiddelde volwassene (8400 kJ/2000 kcal).

** **Valori nutritivi di riferimento (VNR)** / Nutrient reference values (NRVs) / Nährstoffbezugswerte (NRV) / Valeurs nutritionnelles de référence (VNR) / Valores de referencia de nutrientes (VRN) / Voedingswaardereferenties

- A plant or tree native to India, Indonesia and the Philippines that is used for health food and in medicinal practices. Apparently a huge amount of Indonesians are growing this tree in their backyard, with its cultivation having spread to Hawaii, the U.S. virgin island, Florida, Latin America and other places.
- Moringa has unbelievable vitamin and mineral content, to the point you have to worry about overdosing on iron (at over over absolute max daily intake per 100g) and calcium (close to 100% max daily intake per 100g). Vitamin A is very high, but mainly in the harmless beta-carotene variation. Vitamin C - always per 100g - only has 4-5x RDA in fresh leaves. In dried powder you're lucky to come close to 1x RDA, and often is less than 10% RDA. Vitamin E should be about 8x RDA. Magnesium is about 40-80% of RDA, but you can't get anywhere close to overdosing.
- It's probably best to keep Moringa supplementation anywhere from 1-2 grams to maybe 20-40 grams.
- List of vitamins and minerals in 100g moringa leaf powder (so NOT fresh leaf, or even full dried leaf):
  - **Vitamin A:** 16.3-18.3 mg. **RDA:** 1,800-2,000%. It's almost all in beta-carotene, so the 3 mg upper limit per day doesn't apply.
  - **Vitamin C:** 2-30mg. **RDA:** 0% should be counted, because it varies too much. Only fresh leaf is 4-5x RDA.
  - **Vitamin D:** Zero.
  - **Vitamin E:** 113 mg. **RDA:** 15 mg / 750%.
  - **Vitamin B1:** 2.6 mg. **RDA:** 225%.
  - **Vitamin B2:** 20.5 mg. **RDA:** 1,700%.
  - **Vitamin B3:** 8.2mg. **RDA:** 55%.
  - **Vitamin B6:** 1.2 mg. **RDA:** 80%.
  - **Vitamin B9:** 40 µg. **RDA:** 10%.
  - **Vitamin B12** Zero.

  - **Calcium:** 1,400-2,000 mg. **RDA:** 140-200%.
  - **Iron:** 28-39 mg. **RDA:** 300-450%
  - **Magnesium:** 368 mg. **RDA:** 40-80%.
  - **Zinc:** 2-3 mg. **RDA:** 25%.
  - **Copper:** 0.6 mg. **RDA:** 50%.
  - **Manganese:** 1 mg. **RDA:** 50%.
  - **Phosphorus:** 200 mg. **RDA:** 30%.
  - **Potassium:** 1,300 mg. **RDA:** 28%.

    - **Chromium:** -. **RDA:** -.
    - **Molybdenum:** -. **RDA:** -.
    - **Selenium:** -. **RDA:** -.
    - **Boron:** -. **RDA:** -.
    - **Iodine:** -. **RDA:** -.
- Moringa contains quercetin, also found in green tea / matcha, roobos tea, and onions. It helps protect against heart disease and cancer.
- The Moringa extract powder has a superbright green color and needs to stay in the dark to keep its potency. If the extract is dull-colored or even brown, the supplement is inactive and spoiled.
- People have used it successfully to increase their energy, improve their mood, lose weight and belly fat, control their diabetes, lower their blood pressure, and (sometimes fully) reduce their arthritis pain.
- Moringa experiences with arthritis:
    - **YouTube comment:** *"Moringa helped me for arthritis."*
    - **April 11, 2018 YouTube upload by 'Big Family Homestead', 'My Arthritis CURE | 4 years so far':** The man in the video was on a monthly $2,500 shot that kept his shoulder arthritis at bay, at least for 80-90%. When the couple's insurance changed, the shot wasn't covered anymore. Within a few months, the man couldn't lift his arms above his shoulders anymore, as it led to intense, crippling pain. Eventually Moringa leaf relieved 100% of the symptoms.
    - **YouTube comment:** *"Update. It's been 4 months now [on Moringa] and I realized this morning I have no shoulder joint pain... It took a bit longer than I thought it would but it really did work for me and I wanted to thank you for the relief I thought would never come! I take two every night before bed and that seems to be what I needed to do."*
    - **YouTube comment:** *"Thanks to you this info saved me I am 80 years old and was almost bed ridden with arthritis pain. I am pain free for the most part [due to moringa] thanks to you wonderful folks."*
    - **YouTube comment:** *"I have been dx with Rheumatoid arthritis with Plax psoriasis, just on the left side of my body, very painful with knots on the outside of my joints. I was dreading the RX I knew I was going to be prescribed. I love my YouTube searches. That is how I found your channel. I listened to what you had to say about this product. I made a [moringa] smoothie right away. You are not going to believe me; I didn't even believe what I was experiencing. Before I finished the smoothie, I felt some weird sensations in my legs. I thought oh my what have I done. but when I got up from my recliner, I did not have ANY*

PAIN AT ALL. The knots on my joint are much smaller and not painful. I realize. that what I was feeling in my legs was probably the Moringa dealing with the inflammation, and that in turn took care of the pain. Thank you so much for letting people know about this. My grandmother once told me that of all the diseases in the world God has put a natural cure in nature and it is up to us to find it. So, I give Him the praise for this."

- **YouTube comment:** *"I have been bedridden for almost two years. On five strong meds and nothing works. I have tried EVERYTHING, including traveling to Brazil to a spiritual healer and being on a very strict vegan diet. I am extremely disciplined but still nothing. Started Moringa because of your video and so far—six days in— I'm starting to feel better. Mornings I can actually stand and make my own breakfast. Feeling hopeful for the first time in years. I can even dress myself. Still painful but manageable!!!"* **[Update, 2 weeks later:]** *"I have continued to improve! I'd suggest drinking two cups of dandelion tea as well everyday (one in the am and at pm)! When I started drinking the tea with the moringa, all of the sudden I start to REALLY improve. I was at a pain level 8-9 almost everyday. Now I'm at a 5. ... Only 2 weeks in and I have high hopes that this will work for me. I am going to start YouTube videos to document my progress. I have been searching FOR 12 YEARS for solutions..."* **[Update, 2 years later:]** *"I am still taking moringa everyday. However, it has not cured me. It got me out of bed and walking (pain levels went from and 8-9 to 6-7)! It has also helped me GREATLY with iritis and uveitis. Barely any flares since taking moringa (I used to get flares at least once per month, now it's been one year and I've only had one flare!). I take 3-4 pills of moringa per day. I'd highly recommend moringa. Helped with hair loss and overall nutrition. Pain levels went down. While it didnt cure me, it certainly helps!"*
- **YouTube comment:** *"Well I guess I need to talk about my experience with moringa. I have had arthritis for years(I'm 63) and I started taking the pills about 2 and a half weeks ago. Within a few days, I noticed that my hips quit hurting along with my knuckles and knees. The pain was so bad in my hips that I could barely walk. Big thanks for the video you put out. I never would have found it on my own. Even showed my doctor the bottle and he was impressed."*

- Other experiences:
  - **YouTube comment:** *"Am in Africa, specifically Namibia, one of the hottest countries, my mom grows this plant, my granny was on HPT medication and suddenly she stoped, because moringa did wonders."*

- **YouTube comment:** *"My husband has controlled his diabetes with Moringa."*
- **YouTube comment:** *"My mother replaced her diabetes meds with Moringa powder which keeps her blood sugar in check!"*
- **YouTube comment:** *"Moringa has provided me with so many benefits... helped with insomnia, weight loss, lowered bp [blood pressure], got cholesterol in check, my skin, my hair.... omg.... I have steeped the leaves in tea, the powder in smoothies.... Sorry [skeptical TV] Doc... you can't speak for me!"*
- **YouTube comment:** *"In South Florida this plant grows so fast and so easy and can become an enormous tree. It needs to be trimmed often and I see branches of it on the side of the road all the time. ... It helped cure my mom's diabetes and gives me energy and a mental boost."*
- **YouTube comment:** *"I m 61.. one month on moringa no more afternoon naps lot of energy."*
- **YouTube comment:** *"As a chronic insomniac, Moringa tea has work wonders, am getting 8 hrs of sleep."*
- **YouTube comment:** *"I started drinking moringa tea about 5yrs ago. I had sleeping problems but it has improved greatly. It burns belly fat faster than any other thing. It improves memory loss and gives me healthy bones. I love moringa."*
- **YouTube comment:** *"Moringa really works!!!!!! ... I started using the organic tea and my blood pressure dropped and I haven't taken any blood pressure medication in two months!!!!!"*
- **YouTube comment:** *"I use the moringa seed powder and my blood pressure went 160/90 to 109/68 I'm a 71year old woman."*
- **YouTube comment:** *"I've used it daily, preferring the leaf powder. (tea when I'm late). Healthy weight, no longer on B/P meds. And grateful for all the benefits."*
- **YouTube comment:** *"When I was 10 years old, I got diagnosed with low hemoglobin at school. The doctor there asked me to tell my mom to have moringa at least 2 times a week. After a month when my blood was tested again, I had normal readings. Moringa is a miracle product. I am from India and we use it in our food often (sautéed moringa leaves)"*
- **YouTube comment:** *"Massive revelation here- the moringa latte just tried it and it tasted quite delicious might change my coffee routine with this."*
- **YouTube comment:** *"After years of stubborn research I finaly found Moringa and taking it since 3 months has effectively changed my life! My high bloodpressure was gone after 2 weeks, my period is normalised and almost painfree, no sour muscles, my joints aren't bloated and painfull anymore, my*

migraines are less frequent, I lost some weight and although I have a stressfull life I feel great!!! The wonderfull thing about Moringa, except being highly anti-inflammatory and having almost all nutrients the body needs, is that it balances the hormones, it balances everything."

- **YouTube comment:** *"I started taking Moringa and Turmeric every morning and my blood work improved. Inflammation down Cholestrol down. My Doctor said "whatever you are doing keep it up". So yeah I will."*
- **YouTube comment:** *"I bought some for my 16 year old son who has been suffering from sleep issues and lack of focus. It has really affected his life and school. He had his blood work tested and was low in magnesium, vitamin D3 and a little with B12. He's taking those supplements now along with Moringa everyday and let me tell you... he's a new person now! He's focused in school and not groggy and exhausted all the time."*
- **YouTube comment:** *"I recently started taking moringa. I'm an 82 YOF. ... My BP [Blood Pressure] before moringa was 140/90 on 2 BP pills, and after starting moringa it went to 90/61. I stopped one BP pill and it is now 113/69. May need to discontinue the med entirely if BP keeps falling. It hasn't made my arthritis disappear (after 2 weeks on it) but I do have more energy and less pain and have started doing more work around the house. I would see all that needed to be done, get overwhelmed just thinking about it. Now I'm actually just getting up and doing what needs to be done. NSAID's have never done that for me. It may not work for everyone, but if it does work, it works very well. And - there are absolutely no side effects in my case. I take two 1000 mg capsules of a 10:1 concentration each day, one in the a.m. and one in the p.m.*

  UPDATE: *I am completely off BP [Blood Pressure] meds a week later with a BP of around 120/70 or 115/65. Seem to be sleeping better and having more dreams. My GERD is improving. I can't wait until my next blood work to check on cholesterol levels. This moringa is the first stuff that has ever done a thing for me."*

- General health:
  - **YouTube comment:** *"I was born in the Philippines and moringa is always a part of our diet. My grandmother lived to be 102 yrs old and she was never admitted to the hospital and she was never sick nor experienced anything major aside from ordinary fever and common headaches and colds. We have a lot of moringa plants in our garden."*
  - **YouTube comment:** *"I was born in the Philippines and my great grandmother lived to 104 years old. My grandparents lived into their late 90s. My mother is 62, im 42 and we are always mistaken for sisters. We both live in the U.S.A and i have two*

full grown Meringa trees and we both cook with the leaves and grind the seeds for seasoning and tea. It really is an amazing super plant. And, i can tell you, my great grandmother, grand mother, grandfather, uncles and aunties, my mom all have no grey hairs great skin."

- Moringa has been promoted as having an insane amount of vitamins and minerals. the numbers are all over the place though. The numbers reported in 2013 in the "Phytotherapy Research" journal (and copied by Bangladesh researchers and the like) - which are based on a 1981 Indian source and a publication of the "National Council of the Churches of Christ in the United States of America" - clearly are overstated for vitamin C (slightly for fresh, massively in case of dried extract) and protein (it's 3.5x more, not 9x):
  - 2013, no. 2, Phytotherapy Research journal (University of Texas and University of Florida study), 'Potential Uses Of Moringa Oleifera And An Examination Of Antibiotic Efficacy Conferred By M. Oleifera Seed And Leaf Extracts Using Crude Extraction Techniques Available To Underserved Indigenous Populations': *"Gram-for-gram comparisons of M. oleifera leaves (fresh anddried) and other common nutritional plant sources reveals that M. oleifera provides more than seven times the vitamin C found in oranges, 10 times the vitamin A found in carrots, 17 times the calcium found in milk, nine times the protein found in yogurt, 15 times the potassium found in bananas and 25 times the iron found in spinach [9] [10]. The plant also has high concentrations of phosphorus, copper, α-tocopherol [vitamin E], riboflavin, nicotinic acid, folic acid, pyridoxine, and β-carotene [the precursor to vitamin A] [11]. Furthermore, the plant's leaf structure contains significant quantities of the 10 essential amino acids [9] [10]. ...*

    9. Fuglie L. 2001. The Miracle Tree: The Multiple Attributes of Moringa. CTA Publication, Wageningen, The Netherlands. Pp 117-136 [Sic:] in Combating Malnutrition with Moringa.

    10. Gopalan C., B.V. Rama Sastri & S.C. Balasubramanian. 1981. Nutritive values of Indian foods. National Institute of Nutrition, Indian Council of Medical Research, Hyderabad, India."
  - Aug. 10, 2021, International Journal of Food Science, study produced by members of the Bangladesh Council of Scientific and Industrial Research (BCSIR), 'Moringa oleifera is a Prominent Source of Nutrients with Potential Health Benefits': *"Moringa [has] 10 times more vitamins [means vitamin A] than carrots, 7 times more vitamin C than oranges, 17 times more calcium than milk, and 15 times more potassium than bananas [3]. ...*

    3. Rockwood J. L., Anderson B. G., Casamatta D. A. Potential

uses of Moringa oleifera and an examination of antibiotic efficacy conferred by M. oleifera seed and leaf extracts using crude extraction techniques available to under-served indigenous populations. International Journal of Phytothearpy Research. 2013;3(2):61–71. [Google Scholar]."

- April 11, 2018 YouTube upload by 'Big Family Homestead', 'My Arthritis CURE | 4 years so far': *"One serving of moringa has 7 times more vitamin C than oranges, 4x more vitamin A than carrots, 4x more calcium than milk, 78x the potassium of bananas, 7x the protein of yoghurt... Sorry, 2 times. ... 25x the amount of iron in spinach, 3x the vitamin E of almonds, and 50x the vitamin B3 of peanuts."*
- aduna.com/pages/aduna-moringa-frequently-asked-questions (accessed: May 28, 2024): *"It is often reported that moringa powder is rich in vitamin C however, this is inaccurate. While it is true that fresh moringa leaves are high in vitamin C (containing 200mg per 100g), when moringa leaves are dried to form a powder, the vitamin C levels diminish considerably. Dried moringa powder has on average around 2mg of vitamin C per 100g, which is not enough to be classified as a source (it would need 12mg per 100g). We carry out extensive nutritional analysis on all our products and aim to be fully transparent about the nutritional content of our range."*
- June 10, 2021, Food Science & Nutrition, 'A complementary food supplement from local food ingredients to enhance iron intake among children aged 6–59 months in Benin': *"Moringa oleifera leaf powder is recommended for food fortification because of its nutritional potential (Abioye & Aka, 2015; Boateng et al., 2019; Bolarinwa et al., 2019; Karim et al., 2013, 2015). It contains substantial amounts of pro-vitamin A (624.4 μg retinol equivalent/100 g dw) and vitamin C (65.9 mg/100 g dw), protein (24.3 g/100 g dw), calcium (1,443.9 mg/100 g dw), magnesium (176.7 mg/100 g dw), and iron up to 53.7 mg/100 g dw (Hekmat et al., 2015; Kayalto et al., 2013). Nevertheless, its acceptability is limited when mixed with foods, such as porridges, due to its green color (Karim et al., 2013; Salem et al., 2013). Therefore, it is recommended to combine Moringa oleifera leaf powder with other food ingredients to suppress its herbal smell and intense green color (Oyeyinka & Oyeyinka, 2016)."*
- 2018, no. 2, Journal of Microbial & Biochemical Technology, researchers from the University of Bahri in Sudan; University of Albaha and Sattam bin Abdul Aziz University, Saudi Arabia; and the National Research Center of Egypt, 'Nutritional Values of Moringa oleifera, Total Protein, Amino Acid, Vitamins, Minerals, Carbohydrates, Total Fat and Crude Fiber, under the Semi-Arid Conditions of Sudan' (this appears to be some

terrible quality extract; also, there are an enormous amount of grammatical errors in the abstract alone, where it doesn't even mention "per 100 g"; a lot of punctuation marks have been added for clarity): *"The results of Moringa oleifera leaf extract nutritional value per 100 g (3.5 oz)...:*
- carbohydrates: 9.1g,
- dietary: fiber 2.1 g,
- fat: 1.7 g,
- protein: 8.1 g... ***[note: yoghurt has 7 g at the most; a virtually impossible 73g of protein would be 9x. However, Moringa bag label says 24 g of protein, which is 3.5x higher than yoghert; up to 38g have been reported though.]****,*
- vitamin A: 80 µg ***[note: Moringa bag label says 668ug per 100g, so 8.35 more; this study may not include beta-carotene, which is listed separately in the study without a number.]****,*
- thiamine (B1): 0.103 mg,
- Riboflavin (B2): 0.112 mg,
- Niacin (B3): 1.5 [mg]
- pantothenic acids (B5): 0.48 mg.
- vitamin B6: 0.129 mg
- folic acid (B9): 41µg
- Vitamin C: 8.6 mg ... ***[an orange has 53 mg per 100g; 7x more would mean moringa has 371 mg per 100g; update: this is possible, but only with fresh leaf.]****,*
- Calcium: 99.1 mg ***[milk has 125 mg per 100g; 17x more would be 2,125 mg for 100g moringa; then again, other sources say 1,443.9 mg and 1815 mg per 100g]****,*
- Iron: 1.3 mg ***[spinach has 2.7 mg per 100g; 25x more would be 67.5 mg for 100g moringa, 22.5 grams over the maximum safe dose; however, other sources say 39 mg and "up to 53.7 mg" per 100g]****,*
- Magnesium: 35.1 mg ***[another study mentions 176mg and 378mg for 100g of powder]****,*
- Mangenase [sic; Manganese]: 0.119 mg,
- Phosphorus: 70.8 mg,
- Potassium: 471 mg,
- Sodium: 70 mg,
- Zinc: 0.85 mg. ***[other sources, say 2.5-3.1 mg per 100g; and 0.57mg / 60% RDA copper.]***
- Also rich in essentials amino acids (ug/ml):
- Threonine: 36.77,
- Valine: 22.1,
- Methionine: 2.13,
- Leucine: 20.50,
- Isoleucine: 31.8,

- Phenylalanine: 36.8,
- Histidine: 30.88,
- Lycine: 27.67,
- Argnine: 21.45."

NAC

- N-acetylcysteine (NAC) is a precursor to glutathione, the primary antioxidant produced by the liver, and therefore increases glutathione by the liver. It heavily breaks down anything from paracetamo, to sinus mucous, to a vast range of detrimental gut bacteria.
- Supplements are generally sold in 600-800mg pill-form. These days NAC is recommended by the FDA as semi-essential food supplement.
- Health benefits observed in studies include decreases in the chance of flu, heart disease, and cancer. It also detoxes heavy metals:
  - 800mg a day of NAC given for 12 weeks to persons with previous adenomatous colonic polyps decreased the (Ki-67) Proliferation Index within colonic crypts from 0.45 (45%) to just 0.02 (2%), with no statistical difference in the placebo group. [68] The higher the proliferation rate in cancerous cells, the more aggressive the cancer, the quicker it spreads, and the lower the life-expectancy. [69] Proliferation rates of 20-30% are considered high.
  - 600mg a day NAC supplementation resulted in a 40% reduction in polyp recurrence. Study: *"In terms of bowel cancer prevention, just 600 mg/day, resulted in a 40% reduction in polyp recurrence (De Leon and Roncucci 1997). Homocysteine a marker for heart disease was lowered by 45% with the use of NAC in a Swedish study (Wiklund, Fager et al. 1996). NAC has been shown to effectively protect against influenza with one study showing a 54% decrease in the number of people experiencing flu symptoms (De Flora, Grassi et al. 1997)."*
  - ncbi.nlm.nih.gov/pmc/articles/PMC8211525/: *"N-acetylcysteine has been shown to chelate toxic metals in animal studies as well as in human studies with little or no effect on essential metals. Mercury, lead, gold, and arsenic have been removed in humans although the studies are limited. The evidence for removal of lead is more robust because of a double-blind placebo-controlled trial [142]. Metal on metal hip prosthesis often results in increased chromium in the blood and NAC has been helpful in reducing levels safely [143]. Adverse effects of arsenic-induced hepatotoxicity in rats were countered by NAC [144]. In a case report of acute ingestion of a potentially lethal*

overdose of sodium arsenate ant poison, intravenous NAC reversed the clinical outcome of expected death [145]."

- Dec. 1, 2012, Biochem Pharmacol., 'N-Acetylcysteine ethyl ester (NACET): a novel lipophilic cell-permeable cysteine derivative with an unusual pharmacokinetic feature and remarkable antioxidant potential'.
- NAC doesn't fully prevent influenza, but has resulted in a 54% reduction in flu symptoms.
- Stimulates neurotransmitters: glutamate and dopamine.
- Glutathione, hence NAC, consumes estrogen and prevents testosterone from being converted to estrogen.
- Homocysteine, a marker for heart disease, was lowered by 45%.
- Helps regulate cytokines, which play a vital role in the immume system. Feb. 4, 2014, Plos One, 'Long-Time Treatment by Low-Dose N-Acetyl-L-Cysteine Enhances Proinflammatory Cytokine Expressions in LPS-Stimulated Macrophages': *"Previous reports have shown that high-dose N-acetyl-L-cysteine treatment inhibits the expression of proinflammatory cytokines in activated macrophages. Here, we have found that long-time N-acetyl-L-cysteine treatment at low-concentration increases phosphorylation of extracellular signal-regulated kinase 1/2 and AKT, which are essential for the induction of proinflammatory cytokines including interleukin 1β and interleukin 6 in lipopolysaccharide-stimulated RAW264.7 cells. Furthermore, long-time N-acetyl-L-cysteine treatment decreases expressions of protein phosphatases, catalytic subunit of protein phosphatase-2A and dual specificity phosphatase 1. On the other hand, we have found that short-time N-acetyl-L-cysteine treatment at low dose increases p53 expression, which inhibits expressions of proinflammatory cytokines. These observations suggest that long-time low-dose N-acetyl-L-cysteine treatment increases expressions of proinflammatory cytokines through enhancement of kinase phosphorylation."*

- Experiences with NAC improving airways related to bronchites, asthma, Covid, pneumonia, etc.:
  - **YouTube comment:** *"I just got my 88 year old mom to start taking NAC after years of lung issues...in one day she saw a difference and in one week she is remarkably better."*
  - **YouTube comment:** *"I had Covid last year. I had shortness of breath which seemed isolated to upper lobes and trachea seemed like i couldn't breathe. I started taking NAC 1 tab per day then realized the dose for Covid was 4 tabs. After 3 days the*

shortness of breath was GONE!!!! And so was my cardiac arrhythmia"

- **YouTube comment:** *"Unknowing of all benefits, I was using NAC for the past 3 years, someone just recommended it, just to support my lungs as I was a heavy smoker and had regular cough, I didn't realise that it not only eliminated my cough but potentially saved my life ...just perfect timing."*
- **YouTube comment:** *"I've been taking 1000 mg capsules for six weeks and I can't believe how much clearer my lungs are. The expensive inhalers I had tried didn't help, but now I no longer have a productive cough. I too became interested in NAC when they shadow-banned it during the "pandemic"."*
- **YouTube comment:** *"6-7 years ago I had bacterial pneumonia. Got that cleared but the producing cough persisted even after a month. Once my naturopath put me on NAC, the cough was gone within 5 days."*
- **YouTube comment:** *"I havent been sick for more than half a day since taking NAC for around 1 year now, pretty amazing stuff, used to have chronic bronchitis and would get sick if i came with 30ft of someone with a sniffle."*
- **YouTube comment:** *"2 Grams each Taurine, Glycine and NAC (1200MG) Boron 3mg shoot my T level from 350 to 850 in one month.i m 60 and on Trt Since 20years from my doctor due to testees problem and never had that T level that much in 20 years..i feel energetic. Hit the Gym very hard 4 days in a week....love my life now more then when i was 30..i m smoker and used to cough a lot but no more cough. ...*
  I'm on low dose of 0.05ml [of testosterone] since 20 years and yes i have been smoking since 40 years and i m 60years young and yes NAC has clear all my smoking mucus in one week and i breath so well now without counghing. And before using NAC i always cough after every 10min and now no cough at all and even my kids says dad u dont cough anymore so i believe NAC has done job."
- **YouTube comment:** *"I've been taking it on and off (mostly on) for several years, about 1000 mg a day. ... It has dramatically improved my allergy symptoms, which were chronic throat clearing, nasal "stuffiness", and lingering dry cough whenever I had a cold."*
- **YouTube comment:** *"Started taking it after the granddaddy strain of COVID knocked me out in the beginning of 2020 - and my lungs have never been better. I have interstitial lung disease and NAC truly is a game changer. Also, it helps me to manage low-level chronic anxiety."*
- **YouTube comment:** *"As a lifelong asthma sufferer, I can attest too the fact that I am now at 1-1/2 years of not having to take so*

much as one puff off a rescue inhaler, or ADVAIR (Corticosteroid) thanks to NAC. As you stated it is a game changer."

- **YouTube comment:** *"My father has COPD and had very bad, thick mucus to the point of being short of breath. Started giving him NAC everyday for the last 4 months. 90% better than it was, no more SOB. 02 levels 95-97 daily."*
- **YouTube comment:** *"I take 600 mg every day, have since January 2020. I had an upper respiratory infection and hate taking pharmaceuticals so did the research and found NAC. I took 3 a day, along with zinc and C. In two days I was feeling like a new person. Now I take 1 first thing every morning, along with ashwagandha, C and cranberry, all are water soluble. The ashwagandha is for anxiety, the cranberry is to prevent chronic UTIs. I haven't been sick once since January 2020."*
- **YouTube comment:** *"NAC worked perfectly when I ran out of Ivermectin for covid, though it took longer. I took 10,000 mugs at that time."*
- **YouTube comment:** *"I used give this to patients via nebulizer. I used to poor it down endotracheal tubes to loosen mucous. I had no idea I was having such a huge metabolic effect. I do remember patients who swore by it. Never saw a negative reaction to it over the 40 years I gave it. Of course I used bronchodilators often with the nebs."*
- **YouTube comment:** *"The added benefit of taking NAC was that it helped with my asthma symptoms and stopped my yearly bronchitis"*
- **YouTube comment:** *"I know we're not talking about it but NAC cleared my lungs that got crazy congested from covid. It definitely treated my lung congestion, no doubt!! I was able to get off my couch without fainting thanks to NAC."*
- **YouTube comment:** *"I took NAC when I had covid and it really cleared out my congestion. I was able to find it at the vitamin shoppe and I've kept taking it because of its health benefits. I also have had a pulmonary embolism many years ago. I was prescribed a daily aspirin a day but I think the NAC is a better choice! Thank you for this information!"*
- **YouTube comment:** *"I was so shocked that just when NAC seemed to be a helpful supplement for treating viral respiratory illnesses, it was pulled from US shelves/websites! I'm not a conspiracy theorist, but THAT was fishy."*
- **YouTube comment:** *"I always thought that NAC was about to get banned because it was effective against COVID and they didn't want people taking that instead of getting vaxed."*

- Personal experiences with NAC:

- **This author:** The first time I took NAC I began with 1 pill a day of 800mg. I actually slipped into non-reality trance states twice the first time, a symptom that likely is relatively unique to me, but at least it shows that it was doing something.
- **This author:** Taking 6 pills at once (an acceptable therapeutic dose) after roughly the 4th day, resulted in a slight cramp in the upper stomach for a brief second or two. Within 30 minutes I had to run to the toilet, because black fluid literally started to run from ass. The result was thin, black, explosive diarrhea - indicating blood release from the upper gastrointestinal tract. The second day, after taking another 6 pills, the stool again was pitch black diarrhea, but less watery. Hence, an improvement. After sticking to 1 pill a day again, the stool turned to its regular color again within 3 days. Conitnuing with one 800mg pill for 6 weeks, and again trying 6 pills at once after this period, resulted in no effect. The stool remained normal. It actually improved: it more often became brown than yellow, and actually sunk too. This could also be due to the Indole-3-Carbinol / DIM pills that were added though. I definitely should check what is/was going on in the upper colon though, but NAC clearly had an extreme purging effect.
- **This author's experience is that NAC is much more effective than pharmaceutical medicine for sinus clearing:** I indulged a doctor to prescribe me the corticosteroid mometasonfuoraat, created by Sandoz, to open up my sinuses during what turned out to be a double outer- and middle ear infection. Taking it for six days straight, it only worked temporarily, very slowly, resulted in hardened bloody snot lumps, and at one point irritated my stomach when some of it went down my throat with the mucus. And this involves a very mild medicine in terms of side effects...

  At that point I stopped using the mometasonfuoraat, simply increased my NAC dose from 800mg/day to a one-time dose of 8000mg: within 6 hours just about all the mucus in my sinuses flowed down my throat, into my stomach (without toxicity), the breathing through the Eustachian Tubes opened up (also with a little blowing with nose closed), and within 24 hours most of fluid in the middle ear was able to drain itself from behind the ear drum. Pressure, cracking, 110dB tinnitus (when laying down) all disappeared rapidly for the first time in two weeks.

- Other NAC experiences:
  - YouTube comment: *"i am 63 and using Nac restored my sight. i needed glasses 3+ and now i read the small text on products. i did not take it specific for my sight, it was a side effect."*

- YouTube comment: *"I have MTHFR genetic mutation ... MTHFR inhibits the body's natural detoxification processes and without NAC and a good sweat a few times a week I feel toxic and fatigued."*
- YouTube comment: *"Very informative!! Many people assume taking NAC makes glutathione but don't even realize they need sufficient quantities of glycine and glutamine and are totally unaware of the genetic MTHFR issue - and those are the people that REALLY need glutathione and suffer with chronic toxicity."*
- YouTube comment: *"there are multiple studies around that. one also showing glycine as a rate limiting factor as well. so if you supplement glycine, glutathione level is increasing as well. and because glycine is needed for a lot of other things too, like collagen synthesis, i take glycine and nac with a ratio of about 5 to one."*
- YouTube comment: *"At higher doses (2,000+mg daily) it has an antidepressant effect that I was completely unaware of, until I stopped taking it. It wasn't good."*
- YouTube comment: *"I am hypothyroid and I became very sensitive to foaming agents in shampoos, toothpastes and fluoride. The latter would make my gums swell up and my face would become puffy. However, since taking NAC I can now use toothpaste with fluoride in. That being said, I still need to use a SLS free shampoo or I need up with contact dermatitis. Very strange! I believe the glycine and NAC have helped me sleep throughout the night, I now get 4 hours sleep without waking up rather than waking up every hour on the hour."*
- YouTube comment: *"I was dx with Pustular Psoriasis a decade ago. Palliative care was a cream steroid and to wrap my hands and feet in Saran Wrap every night....in perpetuity. It only took one night to know I wasn't going to live like that. Long story short, I take NAC and frankincense every day. I have zero symptoms or signs of my rare type psoriasis. The last time I was at a dermatologist for a rash from a plant, she asked me how I knew I had pustular psoriasis bc there was no evidence on my body. I told her I had managed my psoriasis using NAC & frankincense. She said there was no way I ever had it then. I showed her photos of my hands and feet. She was incredulous. Then she told me to stop taking it bc it could possibly make my rash worse.... She's Pharma trained, so I expected nothing less. I can also vouch for the effects of NAC on the lungs (I have an allergic asthma). I take no pharmaceuticals."*
- YouTube comment: *"I took NAC to boost my immune system during covid but surprise! My hand tremor disappeared.*

Whenever I stop, the tremors will return in a few months. And I haven't used an inhaler in 4 yrs."

- **YouTube comment:** *"Been taking this every day for the past 5 years - why? Because in the winter I used to really feel the cold in my fingers, so much so that sometimes fingers would go white. Taking NAC at 600 mg per day has completely cured this. Don't even bother wearing gloves anymore."*
- **YouTube comment:** *"I swear NAC has made me look 10 years younger.... Glowing."*
- **YouTube comment:** *"Taken it for a month: the bags under my eyes that made me look the emperor in Star Wars are gone. I'm still an old fart but it makes me face look less haggard!"*
- **YouTube comment:** *"We have been using cysteine since the 1990s when my 7 yo son, who was poisoned with pesticide, had an amino acid test. Both blood and urine were low in cysteine, taurine, and phosphoethanolamine. L-cysteine [NAC] supplements raised his cysteine and taurine levels to normal and decreased his ongoing symptoms by about 70%. NAC also in Merck Manual for Tylenol poisoning and in NEJM 2006 article for gadolinium induced kidney damage from the contrast for angiograms."*
- **YouTube comment:** *"I take 600 mg in the morning on an empty stomach. It has cured my gut issues pretty much. Unreal!"*
- **YouTube comment:** *"It helped with the constant inflammation of my bladder and tendency to infection, too. Apparently it attacks biofilms. After about 3 months, I also noticed things like mood swings and lifelong rumination mellowed considerably. I took 700mg powder/day."*
- **YouTube comment:** *"I take NAC for neuropathy symptoms. It certainly doesn't cure it or take away the pain. It does reduce to pain to an almost manageable level though. I stopped taking it for a while and the pain got much, much worse. I started taking it again and the pain is reduced. I started giving it to my 2 autistic kids when they were sick. Not sure if it helped them feel better sooner or not but it has improved their moods significantly so they still take daily."*
- **YouTube comment:** *"Liposomal Glutathione seems far superior in my experience. Never have been sick since starting it."*

Nattokinase

- An enzyme extracted from the fermented soybean dish natto, which has been consumed in Japan for over a thousand year. Nattokinase is produced by the Bacillus subtilis bacteria found in natto. Nattokinase itself is not a fermented food or probiotic. It's just an

isolated enzyme. 100mg of nattokinase apparently roughly corresponds with a small 100 gram dish of natto.

- Just 100mg of orally-taken nattokinase has a strong positive benefit to all aspects of cardiovascular disease prevention and treatment:
  - June 15, 2006, American Journal of Health-System Pharmacy, 'Nattokinase for prevention of thrombosis'.
  - 2008, no. 8, Hypertension Research (official journal of the Japanese Society of Hypertension), 'Effects of Nattokinase on Blood Pressure: A Randomized, Controlled Trial' (Korean study): *"Study participants who were assigned to the intervention group received one capsule containing a nattokinase (2,000 FU/capsule [i.e. just 100mg, a basic, often sold pill amount]) supplement per day for 8 weeks. ... Systolic Blood Pressure: ... Baseline: 145.0 [to] 131.8 [at] 8 week [vs] Control: 143.6 [to] 135.9. [9.1% vs 5.3% improvement.] ... Diastolic Blood Pressure: 94.7 [to] 89.0. [vs] Control: ... 94.0 [to] 91.2. [6% vs 2.8% improvement.] ... These findings suggest that increased intake of nattokinase may play an important role in preventing and treating hypertension."*
  - Feb. 28, 2017, International Journal of Molecular Sciences, 'Nattokinase: An Oral Antithrombotic Agent for the Prevention of Cardiovascular Disease' (Chinese study): "Recently, the fibrinolytic (anti-clotting) capacity of NK has been recognized by Western medicine. [There is] production of NK with high purity for its use in antithrombotic applications."
  - July 5, 2018, Biomarker Insights journal, 'Nattokinase: A Promising Alternative in Prevention and Treatment of Cardiovascular Diseases': *"Clinical investigations of NK in humans are relatively limited. The first NK clinical study [was] conducted in 1990... A further Japanese study examined the efficacy of NK in the prevention of stroke progression in patients with acute ischaemic stroke and showed clear beneficial effects in these patients after oral administration.56 ...*

    The most unique feature of NK is that, as a single compound, it possesses multiple CVD preventative and alleviating pharmacologic effects (namely, antithrombotic, antihypertensive, anticoagulant, anti-atherosclerotic, and neuroprotective effects). There are no other drugs or drug candidates with multiple pharmacologic properties similar to NK. In addition, NK is a natural product that can be administered orally, has a proven safety profile, is economical to use, and provides distinct advantages over other pharmaceutical products. ...

    All the above data suggest that NK could be a good candidate,

without any obvious adverse effects, for the improvement of blood flow and possibly superior to aspirin."

- Nattokinase has the unique ability to shrink nasal polyps, with some people claiming that it is the only (oral) supplement that has gotten rid of their nasal polyps. Nattokinase also thins mucous.
  - 2017, issue 4, Allergology International, pp. 594-602, 'Nattokinase, profibrinolytic enzyme, effectively shrinks the nasal polyp tissue and decreases viscosity of mucus' (Japanese study).
  - March 11, 2025 YouTube upload by Rob Ager (who for years suffered from debilitating nasal fungi and polyps), 'How I cured my chronic sinus infection and nasal polyps - without surgery, steroids or antibiotics', 15:00 and 19:00: *"In the past year, I had no sinus infection recurrence, [but] I still had some blockage going on in the right nostril. Not from congestion, not from infection, but just from polyps that were still there, and I didn't want to take the prednisone steroid again [due to side effects], and it wasn't interfering with my sleep, so it was okay, but I wanted to get rid of it. This [nattokinase] stuff shrunk them within 10 days. Pretty amazing. ...*
    [Then refers to having been inspired by the person behind LactoBacto.com to prevent polyps from coming back with a kimchi probiotic.]"

Papain

- Protein-digesting enzyme found in the papaya plant.
- In a study in which participants were daily provided with one or more tablets of 190 mg bromelain, 95 mg papain and 95 mg ficin, there eye floaters disappeared to the tune of 70%, with also visual acuity improving.
- Many people use papain to improve chronic digestion problems, one assumes of protein-containing food:
  - **Amazon review:** *"It helps with my digestion. It's a very effective supplement for people who suffer from constipation, gas, indigestion, and bloating due to enzyme deficiency. I take one after lunch and another after dinner as well."*
  - **Amazon review:** *"I bought these pills for my mother-in-law. She often has intestinal problems. As I've now heard from my wife, they've helped a lot."*
  - **Reddit comment:** *"From what I remember of taking papain via pills, I had to take A LOT to match the effectiveness of one papaya. ... That is what makes papaya so effective: enzymes. Pineapple also has a lot of enzymes, and oranges and other citrus as well. But pineapple and papaya are the most effective.*

*Wait until the papaya is ripe, it should be almost green brown on the outside and somewhat soft to the touch. Keep in the fridge to keep the skin from going bad to quickly. Ripening can take up to a week-10 days. But it is WAY effective at helping with digestion. ... I have gall stones which inhibits my ability to digest fat (and meat). So I take Pancreatin which has Lipase, Amylase and Protease enzymes for digesting meats and fats. This was the MOST effective enzymes I've ever used. I cant eat food without enzymes (F*** blows) so I've become somewhat a reluctant expert on this stuff. Though I don't want to be."*

Peppermint

- Not researched yet.

Psyllium husk

- The cleaned and dried husks of flea seeds. These consist of 80-85% dietary fiber, about 70% of which is water-soluble. Brown bread only consists of about 6-8% fiber, most of which is non-soluble in water. Broken flaxseed contains about 25-30% fiber and 6–8% in total of soluble fiber.
- Well-researched, popular supplement for:
  - improving bowel movements, either for constipation (has to be taken with a lot of water, forming a gel-like substance in the intestines) or mild diarrea (firms it up).
  - improving the intestinal flora, as insoluble fibers form a key prebiotic food source for good gut bacteria, which ferment it.
  - slowing down the absorption of glucose from the intestines, leading to a more stable blood sugar levels that can be of benefit in particular to people with pre-diabetes or type 2 diabetes.
  - reducing cholesterol, blood sugar, blood pressure, and triglyceride levels.

Senna

- Senna leave extract eradicates Helicobacter Pylori extremely effectively from the gut:
  - Sep. 24, 2015, Special issue no. 1 (S1:1), General Medicine: Open Access journal (L.A.), 'A Comparative Study of Natural Eradication of Helicobacter pylori vs. Antibiotics' (PDF)

- Senna is often used to treat constipation. There are supplement pills for it, often containing about 250mg per capsule; and also teas, which, if the leaves are of decent quality, also have a laxative effect for people. Even some pharmacies sell senna tea. Studies:
  - Jan. 2021, American Journal of Gastroenterology, 'Senna Versus Magnesium Oxide for the Treatment of Chronic Constipation: A Randomized, Placebo-Controlled Trial' (Japanese study): *"Patients were randomly administered stimulant laxative (senna, 1.0 g), osmotic agent (magnesium oxide [MgO], 1.5 g), or placebo for 28 consecutive days. ... Ninety patients (mean age, 42 years; 93% women; mean duration of symptoms, 9.9 years) were enrolled; all completed the study. The response rate for overall improvement was 11.7% in the placebo group, 69.2% in the senna group, and 68.3% in the MgO group (P < 0.0001)."*

Spirulina

- A blue-green algae like Chlorella.
- Can remove heavy metals from the body:
  - 2020, issue 2, Journal of Environmental Pathology, Toxicology, and Oncology, pp. 149–157, 'The Role of Spirulina (Arthrospira) in the Mitigation of Heavy-Metal Toxicity: An Appraisal': *"A total of 58 preclinical studies demonstrate the alleviative effect of Spirulina against experimental arsenic, cadmium, lead, and mercury toxicities. Five clinical studies reported protective effects of Spirulina against arsenic toxicity in humans."*
- No additional research yet.

Tongkat Ali

- Apparently the strongest herb on the planet to not just increase libido, but actually increase testosterone with 20 to 100%.
- Eurycomanone, generally ranging from 2 to 10%, is the key active ingredient. Some people have a much better effect on 2% than 10% versions, so you are just going to have to experiment with it.
- Taking (proper, strong) Tongkat Ali actually very often causes physical sensations, from enormous heat around the kidneys to (mild) soreness in the balls due to increased testosterone production.
- Doing bloodwork before a first Tongkat Ali course really is quite essential. And, if you have the money, maybe doing another one 10 days into the course. The reason is that, apart from elevating testosterone, in many people Tongkat Ali also drives down estradiol (E2), prolactin, and-or cortisol to problematically low levels. These

side effects emerge in some people within 2 to 3 weeks, with it sometimes taking weeks or months to resolve - or, all based on user experiences, not at all. This is the reason you want to be on top of seeing how Tongkat Ali changes all these values.

- You may also want to drop the contents of 1 or 2 Tongkat Ali pills into a few milliliters of water, maybe heat it a little bit, and test the water for heavy metals. The reason for this is that for many years Tongkat Ali supplements from some manufacturers have been tainted with heavy metals. The reason is polluted soil in Indonesia and surrounding countries where many of the plants are harvested.
- User experiences:
  - **This author:** Two pills of Tongkat Ali with 5% Eurycomanone resulted in a seriously upset digestive system. I had to go the restroom all day, having a bright yellow, almost-diarrhea-like stool. The next day the upset was less though and in about 2 weeks it was essentially completely gone, except maybe for a bit of extra farting. That would go away too eventually. Either my digestive system had to get used to the herb, or it was attacking various bad bacteria that garlic, NAC, powdered zeolite, etc. weren't able to get.

    After taking it the first time my balls hurt a bit. That went away though, even after not taking it for two weeks and then starting again. I noticed the intense stomach and kidney heat, especially when waking up at night after taking it in the evening (falling asleep is no problem). It increases horniness, but maybe about by 25%. It's a different type of "plant-based" horniness that is too different a subject to explain in this oversight.

    After taking the pills for about 18 days, with two to four days of no supplements, I started noticing that my wrists were frequently cracking. There was no pain, but it appeared to be a new observation. Having read so much beforehand, including people complaining after x amount of months of painful, dry joints, to me this was an indication that either estradiol (E2), prolactin, and-or cortisol was getting too low. A blood test already showed I was in the low-normal range for estradiol (E2) due to DIM (which I quit halfway through).

    Today, I can take Tongkat Ali 2-3 times a week without my wrists starting to crack. In time I will do another blood test to see where my testosterone and other values are at. I don't really notice any increased alertness anymore. I only did so in the beginning. It seems that this has little relation to testosterone levels, and more is a result of your body and mind getting used to the substance.

Vitamin U

Table 1. Levels of vitamin U and methionine in various food plant r

Common name	Vitamin U level (mg/100 g
Asparagus	18.7±1.0
Broccoli	18.9±1.1
Bud of aralia	19.3±1.0
Burdock	11.0±1.0
Celery	8.3±0.9
Chamchi*	4.0±0.4
Crown daisy	11.1±0.9
Garlic	2.8±0.2
Green onion, large	2.6±0.6
Green tea	0.1±0.0
Kale	23.4±1.6
Komchi*	4.7±0.5
Laver, fresh	2.2±0.3
Leaf mustard	19.6±1.4
Nurukchi*	0.8±0.2
Onion	2.7±0.2
Pak-choi	34.3±2.1
Sanmanul*	14.4±0.7
Shepherd's purse	3.4±0.3
Spinach	45.2±1.3
Sumssukbujaengi*	19.8±0.7
Wasabi	4.7±0.3

'Determination of Vitamin U in Food Plants' Food Science & Technology Research, 2003, no. 4, pp. 316–319.

*Korean wild food plants. Carrots 20 it appears
ND: not detected.
Each value is the mean of 3 replicates±SD. ISGP-studies.com '24

Table 2. Levels of vitamin U and methionine in different parts of fo

Common name	Part of food plants	Vitamin U level (mg/100 g dry wt.)
Chinese cabbage	Core	26.7±1.3
	Middle	39.3±1.2
	Outside	27.8±1.4
Turnip	Leaf	8.5±0.5
	Root	7.3±0.9
Cabbage	Core	30.6±1.7
	Middle	46.4±1.7
	Outside	26.1±1.2
White radish	Leaf	12.5±0.8
	Root (top)	8.5±0.4
	Root (middle)	11.2±0.7
	Root (bottom)	8.5±0.3

Average: 31.3
Average: 15.8
Average: 34.4
Average: 10.1

Each value is the mean of 3 replicates±SD.

- Plant enzyme known as S-Methylmethionine (SMM) or Methylmethioninesulfonium Chloride that first was suggested as "vitamin U" by Stanford professor Garnett Cheney in the 1949 paper 'Rapid Healing of Peptic Ulcers in Patients Receiving Fresh Cabbage Juice', and then again in the 1956 paper 'Vitamin U Therapy of Peptic Ulcer: Experience at San Quentin Prison'. It has not been accepted though as fitting into the "vitamin" category.
- The plant enzyme is extremely beneficial in the healing of gastric ulcers, but has not been studied much since the 1940s and 1950s.
- The original experiments focused on cabbage juice, likely because it was thought to have the highest levels of S-Methylmethionine. Also in 2013 it was determined that stand-alone, cabbage juice was much

more effective at healing gastric ulcers that chlorophyll (chlorella) or kale, which have lower contents of S-Methylmethionine. However, when cabbage juice was mixed with either chlorophyll (chlorella) or kale, all of a sudden the efficiency of the mix shot up exponentially, now being (virtually equal, to the efficacy of modern pharmaceutical drugs as Cimetidinein the healing of gastric ulcers.

- The exponentially increased efficacy of cabbage blends chlorophyll (chlorella) or kale, also indicates that there is more going on than just a tally of "vitamin U". It appears that two or more compounds are working synergistically in that case.
- Spinach contains roughly 50% higher levels of S-Methylmethionine ("vitamin U") even than cabbage, and has independently been verified as having anti-gastric ulcer properties. This seems to indicate that a spinach blend with cabbage, with in chlorophyll (chlorella) or kale, is likely going to be an even more potent mix in healing ulcers than the tested combinations without spinach. Due to a total lack of testing, this is not certain.
- A list of studies:
  - Jan. 1949, No. 1, California Medicine (uploaded atncbi.nlm.nih.gov), 'Rapid Healing of Peptic Ulcers in Patients Receiving Fresh Cabbage Juice': *"Thirteen patients with peptic ulcer were treated with fresh cabbage juice, which, experiments have indicated, contains an anti-peptic ulcer factor. ... **The average crater healing time for seven of these patients who had duodenal ulcer was only 10.4 days, while the average time as reported in the literature, in 62 patients treated by standard therapy, was 37 days. The average crater healing time for six patients with gastric ulcer treated with cabbage juice was only 7.3 days, compared with 42 days**, as reported in the literature, for six patients treated by standard therapy. ...*
    It is important to note that the cabbage is not the sole source of the anti-ulcer factor. It has been shown experimentally that it is present in varying concentration in a variety of fresh greens and cereal grasses as well as fresh milk, raw egg yolks, certain animal and vegetable fats and gastric mucosa.2 3 5 It has not been identified as any one of the known vitamins or any food factor which has been isolated. Large doses of ascorbic acid are protective against histamin-induced peptic ulcers in guinea pigs, 3 but ... The fact that the anti-peptic ulcer factor is readily destroyed by heat indicates that the preparation of food for human consumption by heating or cooking may completely destroy this factor. If this is so, it may become necessary to include certain raw foods in the diet of peptic ulcer patients, not only to promote the healing of ulcers which have already

formed, but to prevent the development of lesions in the future. At present pasteurized or even raw milk cannot be relied upon alone to accomplish this purpose. Experimental studies which are going on at present strongly indicate that fresh greens, milk and eggs contain a great deal less of the anti-ulcer factor in the fall in California than they did in the springand summer. It is noteworthy that there is a high seasonal incidence of peptic ulcer symptoms in the late fall in northern California. ...

As 6gm. of leaves or 12 cc. [0.012 liter, 0.12 ml] of juice daily would protect approximately one kilogram of guinea pig, it was calculated on the basis of relative body weight that the amount of juice necessary to adequately supply a 60-kilogram patient with the anti-peptic ulcer factor would be about 720 cc. To allow for variability in body weights of patients and for other unknown variables, it was felt that a patient should receive more than this amount of juice, so that a liter per day was chosen as the standard dose. Occasionally a patient would take as little as 500 or 600 cc. daily for one or two days until he became accustomed to this rather unusual beverage. One patient, case 10, consistently drank at least 1,200 cc. daily. ...

All of the cabbage head was used. A juice press was employed to obtain clear cabbage juice. Usually about 2 kg. of cabbage was fed into the press to obtain 1,000 cc. of juice."

- 1956, No. 1, California Medicine, 'Vitamin U Therapy of Peptic Ulcer: Experience at San Quentin Prison': *"The first was a preparation of vitamin U concentrate, each dose of which was derived from a quart [0.95 liter] of freshly pressed raw cabbage juice. The dose amounted to approximately 50 cc [55 ml] per container and was flavored with syrup as previously described. [6] The second form of medication was made up to look and taste and smell like the first but contained no vitamin U. This was designated as placebo. ...*

  In all but two of the 26 cases in which vitamin U therapy was given, ulcer crater healing occurred within a period of three weeks-a "success" ratio of 92.3 per cent. As previously noted, the only two "failures" were healed at four and five weeks."
- May 2013, Journal of the Korean Society of Food Science and Nutrition, 'Inhibitory Effects of Cabbage Juice and Cabbage-Mixed Juice on the Growth of AGS Human Gastric Cancer Cells and on HCl-Ethanol Induced Gastritis in Rats': *"This study determined the effects of cabbage juice and cabbage-mixed juices on the growth of AGS human gastric cancer cells and their anti-gastritic effects on HCl-ethanol induced gastritis in SD rats. Cabbage juice showed the highest growth inhibition on AGS gastric cancer cells in vitro (42%), compared with chlorella (20%) and kale juice (21%). However, cabbage-*

chlorella and cabbage-kale juice mixtures (at a 7:3 ratio) showed synergistic effects (57% and 65% inhibitory effects, respectively) on the gastric cancer cells. Inflammatory genes (iNOS, COX-2, TNF- and IL-) were significantly down-regulated in the mixed juices. Tests of DPPH radical scavenging activity and acid-neutralizing capacity with the mixed juices also showed this trend, as cabbage-chlorella and cabbage-kale mixed juices showed synergistic effects compared to cabbage juice alone. The inhibition rate of acute gastritis induced by HCl-ethanol in rats was 46% with high amounts of cabbage (CH; 800 mg/kg), 71% with high amounts of cabbage and chlorella (CChH; 800 mg/kg), 74% with high amounts of cabbage and kale (CKH; 800 mg/kg), and 75% with [traditional heartburn and peptic ulcer inhibitor drug] Cimetidine (positive control) compared with the control. In addition, rates with CChH and CKH showed decreasing gastric secretions with increasing pH. These results show that cabbage juice and cabbage-mixed juices, especially with chlorella or kale, exhibit remarkable anti-gastritic effects and can be administered for a long period for the prevention and treatment of gastric cancer and gastritis."

- June 2015, Nippon Shokuhin Kagaku Kogaku Kaishi, 'Determination of Vitamin C, S -methylmethionine and Polyphenol Contents, and Functional Activities of Different Parts of Broccoli': *"We studied the nutritional components and functional activities of 6 parts (flower bud, stem, lower main stalk, leaf stalk, leaf, root) of raw whole broccoli (Brassica oleracea var. Italica). Flower buds showed the highest levels of vitamin C (188.2 mg/100 g) and S-methylmethionine (16.7 mg/100 g). The buds contained 64.9 mg/100 g of polyphenols. Moreover, they exhibited the highest histamine release inhibitory activity. The vitamin C, S-methylmethionine and polyphenol contents of the leaves were 18%, 29% and 3.1 times those of flower buds, respectively."*

- Spinach stomach ulcer healing:
  - May 15, 2008, ChemistryWorld.com, 'Spinach may cut stomach ulcer risk' (not attributed to "vitamin U"): *"Joel Petersson was awarded his PhD by the University of Uppsala on May 9 for the study, which shows that rats fed on a nitrate-rich diet had a thicker layer of mucus lining their stomachs, protecting them from hydrochloric acid in gastric juice and cutting the risk of ulcers. ...*

    Petersson found that mouth bacteria play a vital part in the process. Nitrates in food are absorbed in the gut and enter the blood stream. From here they get into saliva but are reduced to

nitrites by oral bacteria. After being swallowed, the nitrites are reduced to nitric oxide by stomach acid. Nitric oxide, an important signalling molecule, triggers an increase in the flow of blood to the stomach, helping to renew and thicken its mucus lining.

"We have wasted millions in trying to reduce nitrate levels in drinking water when there is no real evidence to show that it is harmful to humans" - Joel Petersson. When Petersson gave rats an antibacterial mouthwash to kill the oral bacteria, he found they were more vulnerable to stomach ulcers."

- 2023, Scientific Reports journal, 'Accelerated wound healing induced by spinach extract in experimental model diabetic rats with streptozotocin': *"To our knowledge, this is the first study to show the effect of spinach extract on diabetic wound healing enhancement which has provided novel data."*

- More:
  - Aug. 2013, Cancer Science, 'Cruciferous vegetable consumption and gastric cancer risk: A meta-analysis of epidemiological studies': *"Although infection with Helicobacter pylori (Hp) is strongly implicated in gastric cancer etiology, [3], [4] infecting 50% of the world's population, <5% of infected hosts will develop cancer, suggesting that such infection is not sufficient alone to cause this malignancy. [5]"*

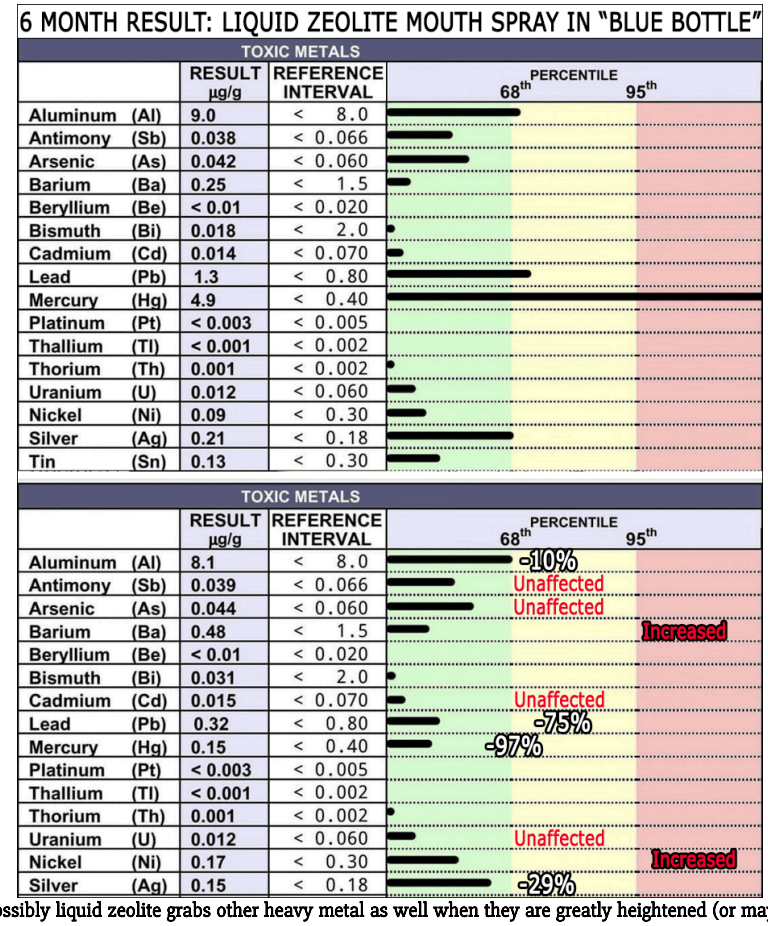
Wheatgrass

- No research yet.

Wormwood

- Latin name is Artemisia absinthium. In Germany, where many supplements are made/distributed from in Europe, it's called Wermutkraut.
- Very toxic for parasites. Like garlic and (black) walnut cloves. First do a day of bile salts to get those open first.
- A pharmaceutical alternative could be fenbendazole, which has few side effects, if any when taken briefly.

Zeolite


6 MONTH RESULT: LIQUID ZEOLITE MOUTH SPRAY IN "BLUE BOTTLE"
TOXIC METALS
RESULT µg/g
REFERENCE INTERVAL
PERCENTILE 68th 95th
Aluminum (Al) 9.0 < 8.0
Antimony (Sb) 0.038 < 0.066
Arsenic (As) 0.042 < 0.060
Barium (Ba) 0.25 < 1.5
Beryllium (Be) < 0.01 < 0.020
Bismuth (Bi) 0.018 < 2.0
Cadmium (Cd) 0.014 < 0.070
Lead (Pb) 1.3 < 0.80
Mercury (Hg) 4.9 < 0.40
Platinum (Pt) < 0.003 < 0.005
Thallium (Tl) < 0.001 < 0.002
Thorium (Th) 0.001 < 0.002
Uranium (U) 0.012 < 0.060
Nickel (Ni) 0.09 < 0.30
Silver (Ag) 0.21 < 0.18
Tin (Sn) 0.13 < 0.30
TOXIC METALS
RESULT µg/g
REFERENCE INTERVAL
PERCENTILE 68th 95th
Aluminum (Al) 8.1 < 8.0 -10%
Antimony (Sb) 0.039 < 0.066 Unaffected
Arsenic (As) 0.044 < 0.060 Unaffected
Barium (Ba) 0.48 < 1.5 Increased
Beryllium (Be) < 0.01 < 0.020
Bismuth (Bi) 0.031 < 2.0
Cadmium (Cd) 0.015 < 0.070 Unaffected
Lead (Pb) 0.32 < 0.80 -75%
Mercury (Hg) 0.15 < 0.40 -97%
Platinum (Pt) < 0.003 < 0.005
Thallium (Tl) < 0.001 < 0.002
Thorium (Th) 0.001 < 0.002
Uranium (U) 0.012 < 0.060 Unaffected
Nickel (Ni) 0.17 < 0.30 Increased
Silver (Ag) 0.15 < 0.18 -29%

Possibly liquid zeolite grabs other heavy metal as well when they are greatly heightened (or maybe the powder does), but from this one user result, liquid zeolite is primarily good for reducing mercury, then lead, followed by silver and finally, somewhat, aluminum.

- Ultrafine volcanic rock formed through the interaction of lava and seawater. It is strongly negatively charged, cage-like structure attracts and locks in any positively charged particles, most notably heavy metals. Reportedly it also grabs microplastics (usually negatively charged) and kills bad bacteria and worms.
- Zeolite didn't seem to have any effect on zinc and copper supplementation with this author. Despite both being negatively-charged particles, both were very high after supplementation alongside zeolite, often taken around the same time. Studies confirm that zeolite largely leaves beneficial minerals alone.
- Experiences:
  - **This author:** The first time I took half a teaspoon of powdered zeolite (of a particle size too large to leave the colon it appears), I woke up with a major headbuzz, apparently because heavy metal particles were being picked up and deposited elsewhere. The second night, after taking a full teaspoon of zeolite, I again woke up with a headbuzz. This time I was so disoriented I had trouble standing up straight on two legs. Two large teaspoons were taken the next day. From that moment on all symptoms disappeared. I didn't have any particular heavy metal issues as far as I knew. I just gave it a try, assuming I must have some heavy metals in my body.

- Experiences with liquid zeolite appear to be very positive:
  - Reddit comment: *"Have you heard of cliniptolite zeolites? I had heavy mercury poisoning 2 years ago - also high lead, and more. I spent tens of thousands of dollars trying to figure it out with a functional medicine Dr. before we finally did a metal test. We found I had Candida, was celiacs, and all these other things but I was still ill after treating those things. She recommended a different metal therapy but I joined a support group on FB and it was there that I saw a bunch of people improving rapidly with a zeolite spray in a blue bottle... I started spraying in my mouth once a day, increasing the doses. I immediately began to feel better the 1st month, and continued taking it for 2 years. I feel like a totally different person. I honestly don't know why it's not more well known given how common heavy metals and toxicity are. Here are test results between 6 months... starrynightvm.mycoseva.com/ shopline_category.html?category=Detox ... imgur.com/a/izTviTw [the screenshot of before and after test results show greatly reduced mercury, but also lead and a bit of silver and aluminum]."*
  - Reddit comment: *"I have been taking zeolite for heavy metal detox and I can testify it works and yes it does work very well. ... I take liquid zeolite from PBX. I feel like my cognitive function is so much better; as there's no brain fog. The biggest thing I can say really impressed me was the fact my gut health is SOO much more healthy. I couldn't even eat food before without taking 2 bites and being full. I actually got my appetite back! Also I noticed it elevates my mood & prevents brain damage. ... So I can say it changed my life for the better! And yes I believe the liquid one is best for me, but I haven't tried powder."*
  - Reddit comment (that needs to be looked into): *"I successfully used DMSA for my former lead problem but used Cutler's dosing protocol and supporting supplements."*

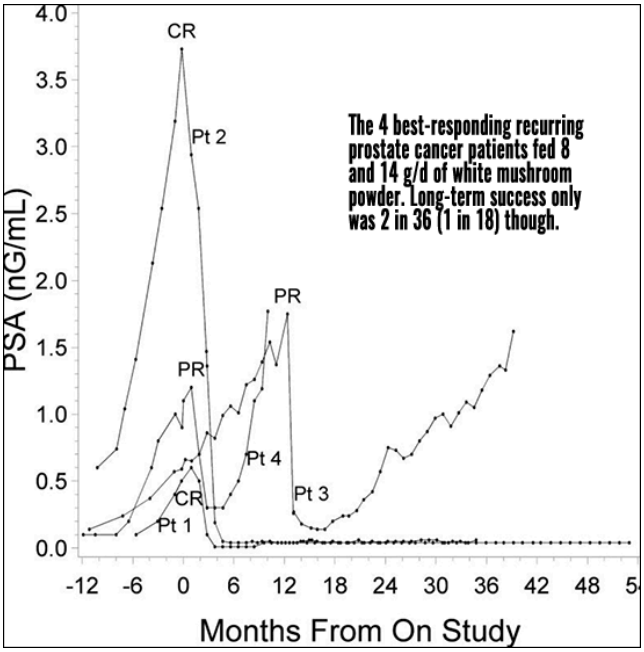
Mushrooms

A. bisporus / White mushrooms

- Scientific name is Agaricus bisporus. Referred to as "white mushrooms" or "white button mushrooms" in the U.S., and as "Champignons" in the Netherlands.
- White mushrooms do not seem to contain many nutritional elements in terms of protein, vitamins, or minerals. They also

haven't been investigated extensively. There do appear to be extra compounds in mushrooms with health benefits.

- Put white mushrooms, or slices of white mushroom, in the sun (or use sun-dried ones, which on average have 16.9 µg/g [640 IU of mainly vitamin D2 per dried gram... which is quite a lot]) for 20 minutes and they have converted very significant levels of sunlight into vitamin D2, generally close to RDA or even above it per 100 grams. Cooking them subsequently will keep about 85% of the vitamin D. [70]
- In one anti-cancer study, 1 in 18 patients with recurring prostate cancer seemingly were saved, at least for a number of years, by simply ingesting 8-14 grams of white mushroom powder (fresh mushrooms or larger amounts may have yielded better results still):
  - Sep. 1, 2015, Cancer journal, 'A phase I trial of mushroom powder in patients with biochemically recurrent prostate cancer: Roles of cytokines and myeloid-derived suppressor cells for Agaricus bisporus-induced prostate-specific antigen responses': *"Each year in the United States, nearly 50,000 prostate cancer patients exhibit a rise in prostate-specific antigen (PSA) levels, which can indicate disease recurrence. For patients with biochemically recurrent prostate cancer, we evaluated the effects of white button mushroom (WBM) powder on serum PSA levels and determined the tolerability and biological activity of WBM. ...*
    Results: Thirty-six patients were treated... The overall PSA response rate was 11%. Two patients receiving 8 and 14 g/d demonstrated complete response (CR): their PSA declined to undetectable levels that continued for 49 and 30 months. Two patients who received 8 and 12 g/d experienced partial response (PR). After 3 months of therapy, 13 (36%) patients experienced some PSA decrease below baseline."


The 4 best-responding recurring prostate cancer patients fed 8 and 14 g/d of white mushroom powder. Long-term success only was 2 in 36 (1 in 18) though.
PSA (nG/mL)
Months From On Study
CR
Pt 2
PR
PR
Pt 4
Pt 3
CR
Pt 1

- In Japan, habitual 3x or more per week mushroom intake has been shown to decrease the long-term chances of prostate cancer (and likely other cancers and diseases) by about 10% compared to people eating mushrooms less than 1x per week:
  - Sep. 4, 2019, International Journal of Cancer, 'Mushroom consumption and incident risk of prostate cancer in Japan: A pooled analysis of the Miyagi Cohort Study and the Ohsaki Cohort Study': *"Finally, 36,499 cancer-free men were used in our analyses... During a total of 574,397 (median 13.2, interquartile range 11.5) person-years of follow-up, 1,204 (3.3%) cases of prostate cancer were documented. ... Table 2: ... Incident prostate cancer (%) 3.42 [for <1 time/week], 3.26 [for 1–2 times/week] 3.11 [for ≥3 times/week]. ... The present study showed an inverse relationship between mushroom consumption and incident prostate cancer... This inverse relationship was especially obvious among participants aged ≥50 years and did not differ by clinical stage of cancer and intake of vegetables, fruit, meat and dairy products. ...*
    In vivo and in vitro evidence has shown that mushrooms have the potential to prevent several kinds of cancers (e.g., those of the breast, bladder, colon and lung), including prostate cancer. Extracts of mushrooms such as Agaricus blazei Murill,5 Agaricus bisporus,6 Trametes versicolor,7 Cordyceps militaris 8 and Coprinus comatus 9 were suggested to inhibit cell proliferation in human prostate cancer cell lines and to restrict prostate tumorigenic progression from the hormone-dependent to the hormone-refractory state."

A. blazei

- The Agaricus blazei Murrill is an edible mushroom known under many names: Cyperus mushroom (scientific name), ABM, almond mushroom, almond agaricus, mushroom of the sun, God's mushroom, mushroom of life, royal sun agaricus, jisongrong in China, himematsutake in Japan, and Bladhoopchampignon in Dutch. Apparently the mushroom is genetically similar to the North American Agaricus subrufescens and the Europe-based Agaricus rufotegulis. Therefore the overall name is Agaricus subrufescens.
- It's the most commonly used health food in Japan.
- Reported health benefits including anti-viral activity, improving the gastrointestinal tract, increasing insulin production, lowering blood pressure, and suppressing cancer.
- In Japan, habitual 3x or more per week mushroom intake has been shown to decrease the long-term chances of prostate cancer (and likely other cancers and diseases) by about 10% compared to people eating mushrooms less than 1x per week. See White Mushrooms for details.
- Anti-cancer studies have been done. For the most part, in practice, taking supplements or the whole fresh mushroom, it doesn't seem to have partiocularly strong cancer fighting abilities. It only has those when compounds are isolated and injected.
  - July-Aug. 2004, International Journal of Gynecological Cancer: Homepage, 'Natural killer cell activity and quality of life were improved by consumption of a mushroom extract, Agaricus blazei Murill Kyowa, in gynecological cancer patients undergoing chemotherapy'.
  - 2013, no. 2, Journal of EcoAgriTourism, 'Therapeutically and pharmacological virtues of god’s mushroom – agaricus blazei murill. Inhibitory effects in infection, cancer and diabetes': *"In the experiment conducted by a research group led by Professors Hitoshi Ito and Shimura Keishiro in Japan, the preparation of Agaricusblazei Murill was administered to mice implanted with cancer. Their complete recovery rate was found to be 90.4% and the rate of progress was halting 99.4%. The results were reported at the general meeting of the Japanese Academy of Mycology, Pharmacology and Cancer.*
    From studies done on mice, it was determined that the most effective preparation comprises the following extracts: 82% ABM, 15% Hericium erinaceum (Japanese:Yamabushitake) and 3% Grifola frondosa (Maitake), all three belonging to the same family of the Basidiomicettes. This reduced the number of bacteria susceptible mice infected blood and increased animal survival test. Following the success obtained in tests done on mice, have followed a series of tests on humans suffering from various diseases."

- **Closely-related to the study in question by the same persons:** Nov. 1, 1990, Japan Society for Bioscience, Biotechnology, and Agrochemistry, Keishiro Shimura, Ito Histoshi, a.o., 'Antitumor Activity and Some Properties of Water-insoluble Hetero-glycans from “Himematsutake,” the Fruiting Body of Agaricus blazei Murill': *"After extraction of a hot-water-soluble polysaccharide (FI) from the fruiting bodies of Himematsutake (Agaricus blazei Murill), water-insoluble polysaccharides were obtained...*
  It is quite novel that the polysaccharide portion of the remarkably antitumor-active FIII-2-b obtained from Himematsutake was a (1-+6)-/)-o-glucan. In addition, it is worth noticing that the FIII-2-b was a polysaccharide-protein complex and it has strong antitumor effect on Sarcoma 180/mice by both i.p. and p.o. routes. (1, 9). ...
  1. T. Mizuno, T. Hagiwara, T. Nakamura, H. Ito, K. Shimura, T. Sumiya and A. Asakura, Agric. Bioi. Chern., 54, 2889 (1990). ...
  9. T. Mizuno, H. Ito, K. Shimura, M. Kawade, M. Kawagishi, T. Hagiwara and T. Nakamura, Japan Kokai Tokkyo Koho, 64, 66, 127; 64, 67, 194; 64, 67, 195 (Mar. 13, 1989); 2, 78, 630 (Mar. 19, 1990). ...
  Table IV. ANTITUMOR EFFECTS OF FII-2-b 2 , FIT-2-b 3 , AND FII-2-b~ AGAINST SOLID SARCOMA 180/MICE, i.p.: 21.0 [to] 52.5[%]... [so not the study referred to above]..."
- June 5, 2013, International Jounal of Oncology, 'Immunostimulatory properties and antitumor activities of glucans': *"Finally, the efficacy of some types of fungal derivatives like lentinan, pachymaran, scleroglucan, curdland, grifolan and Agaricus blazei (1→3)-β-D-glucan resulted particularly high in various in vivo models of cancer. According to the reports, the tumor inhibition ratio in animal models range from 90.4 (scleroglucan) to 99.6% (lentinan) (119–122)."*

Lion's mane mushroom

- Mushroom that looks like a lion's mane. It's formal name is Hericium erinaceus. The mushroom is native to North America and Eurasia, and prefer to grow on dead hardwood or wounded hardwood trees.
- The mushroom seems to have a powerful influence of the human psyche, often being able to cure ADHD, anxiety and depression. However, for other people it generates or worsens these issues.
- Studies:

- Issue 4, 2010, Biomedical Research, pp. 231-237, 'Reduction of depression and anxiety by 4 weeks Hericium erinaceus intake' (Japanese study): *"Hericium erinaceus: ... especially hericenones and erinacines isolated from its fruiting body stimulate nerve growth factor (NGF) synthesis, which expects H. erinaceus to have some effects on brain functions and autonomic nervous system. Herein, we investigated the clinical effects of H. erinaceus... Thirty females were randomly assigned to either the H. erinaceus (HE) group or the placebo group and took HE cookies or placebo cookies for 4 weeks. Each of the CES-D [Epidemiologic Studies Depression Scale] and the ICI [Indefinite Complaints Index] score after the HE [H. erinaceus] intake was significantly lower than that before. ... Our results show that HE intake has the possibility to reduce depression and anxiety and these results suggest a different mechanism from NGF-enhancing action of H. erinaceus."*
- Dec. 25, 2019, International Journal of Molecular Science, 'Therapeutic Potential of Hericium erinaceus for Depressive Disorder' (Hong Kong - Malaysian study): *"Although various anti-depressants are currently available, their efficacies are barely adequate and many have side effects. Hericium erinaceus, also known as Lion's mane mushroom, has been shown to have various health benefits, including antioxidative, antidiabetic, anticancer, anti-inflammatory, antimicrobial, antihyperglycemic, and hypolipidemic effects. It has been used to treat cognitive impairment, Parkinson's disease, and Alzheimer's disease."*
- Nov. 20, 2023, Nutrients journal, 'The Acute and Chronic Effects of Lion's Mane Mushroom Supplementation on Cognitive Function, Stress and Mood in Young Adults: A Double-Blind, Parallel Groups, Pilot Study': *"This randomized, double-blind, placebo-controlled, parallel-groups design investigated the acute (60 min post dose) and chronic (28-day intervention) effects of 1.8 g Hericium erinaceus in 41 healthy adults aged 18–45 years. Results: Analysis revealed that following a single dose of Hericium erinaceus, participants performed quicker on the Stroop task (p = 0.005) at 60 min post dose. A trend towards reduced subjective stress was observed following 28-day supplementation (p = 0.051)."*
- March 2024, Neuroscience & Biobehavioral Reviews, 'A review of the effects of mushrooms on mood and neurocognitive health across the lifespan': *"Studies mainly investigated Lion's Mane (Hericium erinaceus), showing some enhancement of mood and cognitive function in middle-aged and older adults."*

- Experiences:

- **Reddit comment:** *"There was a guy on r/nootropics telling his story, how he had a brain injury, lost all memory and everything, had to re learn how to tie his shoes, this was 10 years ago. He started supplementing lions mane 4 months ago, 2 month ago memories started coming back (from 10 years ago all lost!!!) and now he remembers stuff."*
- **Reddit comment:** *""*
- **Reddit comment:** *"I actually had that constant anxiety and severe depression before taking it and it's actually helped to eliminate those feelings for me [in contrast to it causing depression and anxiety for you that took a week to lift]."*
- **Reddit comment:** *"Same.. I felt great then on the 7th and 8th day I had a massive anxiety/panic attacks for no real reason. Upon reading further, people say to cycle the Lions Mane... e.g. 5 days on 2 days off..."*
- **Reddit comment:** *"Have noticed I have more of a 'pep' in my step (on the days I've remembered to take it). I wouldn't say it's made a discernable difference to my concentration, but it's definitely improved my outlook and motivation to get things done."*
- **Reddit comment:** *"I'm gonna be honest here, Lion's mane has helped my inattentive ADHD symptoms more than Ritalin & adderall, without the negative side effects that comes from those meds. Its boosted my mood, motivation, and overall feeling significantly more clear minded. I noticed that ADHD meds fuck up my mood in unpredictable ways. I find myself irritable, angry, then suddenly happy, then suddenly depressed & numb when it wears off. However, I havent had these problems with lions mane."*
- **Reddit comment:** *"I've been forced to withdraw from my usual medication (elvanse 60mg) because of a combination of shortages and total incompetence from my GP surgery. Last time this happened, it was horrific. This time, I've been taking lion's mane and found it has helped massively. I'm still struggling overall with concentration and organisation but compared to no medication, it is massively better."*
- **Reddit comment:** *"My journal entries prior to taking Lions Mane showed stress, depression , anxiety and shame. But the days I took it my journal entries were positive and upbeat. When I would skip days my journal entries would be less and less upbeat and after 3 days they were almost as sad as they were before. ... Lions mane: "today i took the pills. Today i feel: calm, focused, positive.""*
- **Reddit comment:** *"I was also diagnosed with high level ADHD. I'm extremely active and can't sit still for more than 10mins max. I always have several jobs on the go and find it extremely*

hard to focus on anything, so I gave Lions Maine a go myself. I took 2 x 2000mg of lions maine supplements as recommended on the bottle. Within a week my life was organised and my focus was sharp. I thought it maybe a coincidence and just continued taking the supplements daily until the bottle ran out. I didn't restock as I wasn't convinced it was the cause for the change, plus, I felt better now. 2 weeks after I stopped taking the Lions Maine, I looked around my house and saw chaos! I had at least 3 jobs on the go in every room and was totally unable to focus on one thing. I thought, SHIT! Ha. I re ordered the Lions Maine and after 3 days, calm was restored. I am completely convinced now that Lions Maine is a massive help for ADHD symptoms."

P. cubensis

- Psilocybe cubensis are a class of psychedelic mushrooms, with the main active component being psilocybin.
- Psychedelic effects on health are not discussed in this oversight. It's a whole different type of discussion.
- Psilocybin has neuroregenerative characteristics.
- In Japan, habitual 3x or more per week mushroom intake has been shown to decrease the long-term chances of prostate cancer (and likely other cancers and diseases) by about 10% compared to people eating mushrooms less than 1x per week. See White Mushrooms for details.
- Not researched in any detail yet.

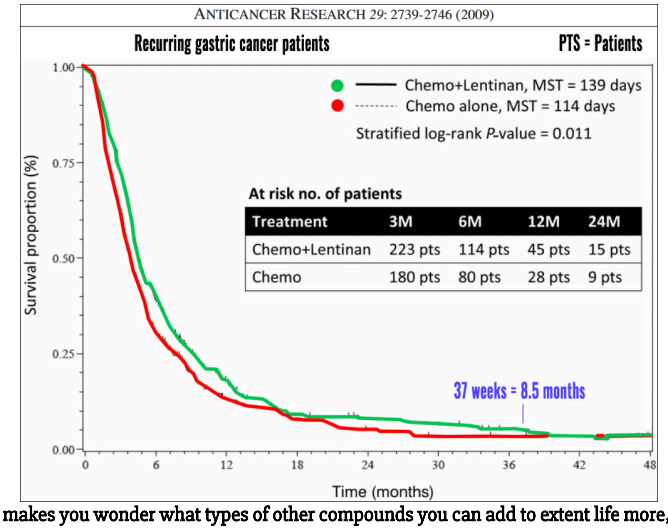
Reishi

- Mushroom very popular in China, Japan and Korea for its health benefits.
- Yet another compound that has demonstrated in can kill cancer in vitro, but with limited real world studies have been done.
- In Japan, habitual 3x or more per week mushroom intake has been shown to decrease the long-term chances of prostate cancer (and likely other cancers and diseases) by about 10% compared to people eating mushrooms less than 1x per week. See White Mushrooms for details.
- Used in patients with AIDS and cancer to stimulate the immune system. Studies have shown it increases white blood cell counts and improves the function of lymphocytes.
- Reduces chronic fatigue.

- People are often limited to taking mushroom extracts while consuming fresh mushrooms has a many times more potent effect.

Shiitake

- Known as Xianggu in China.
- In Japan, habitual 3x or more per week mushroom intake has been shown to decrease the long-term chances of prostate cancer (and likely other cancers and diseases) by about 10% compared to people eating mushrooms less than 1x per week. See White Mushrooms for details.
- Lentinan, a tiny aspect of Shiitake, is a potent anti-cancer compound and has been recognized and implemented as such in China and Japan since the 1980s. It only increases life expectancy though for terminal cancer patients, and doesn't seem to actually cure any cancer. Shiitake mushroom extract also won't kill a cancer once it has developed.
  - 2009, Anticancer Research journal, 'Individual Patient Based Meta-analysis of Lentinan for Unresectable/Recurrent Gastric Cancer':


ANTICANCER RESEARCH 29: 2739-2746 (2009)
Recurring gastric cancer patients
PTS = Patients
Chemo+Lentinan, MST = 139 days
Chemo alone, MST = 114 days
Stratified log-rank P-value = 0.011
At risk no. of patients
Treatment 3M 6M 12M 24M
Chemo+Lentinan 223 pts 114 pts 45 pts 15 pts
Chemo 180 pts 80 pts 28 pts 9 pts
37 weeks = 8.5 months
Survival proportion (%)
1.00
0.75
0.50
0.25
0.00
0 6 12 18 24 30 36 42 48
Time (months)

It makes you wonder what types of other compounds you can add to extent life more, or even to halt progression. Think of turmeric, allicin in raw garlic, quercetin in onions, etc.

  - June 5, 2013, International Jounal of Oncology, 'Immunostimulatory properties and antitumor activities of glucans': *"Finally, the efficacy of some types of fungal derivatives like lentinan, pachymaran, scleroglucan, curdland, grifolan and Agaricus blazei (1→3)-β-D-glucan resulted particularly high in various in vivo models of cancer. According to the reports, the tumor inhibition ratio in animal models range from 90.4 (scleroglucan) to 99.6% (lentinan) (119–122)."*
  - April 4, 2019, Progress in Molecular Biology and Translational Science, 'Mushroom polysaccharide lentinan for treating different types of cancers: A review of 12 years clinical studies in China': *"The antitumor property of lentinan was reported in*

1960s. Biochemical studies indicate that immunocytes can be activated by lentinan through multiple signaling pathways... Though it has been approved as an adjuvant therapeutic drug both in China and Japan for treating cancers since 1980s, a systematic review of clinical studies of lentinan has not been conducted elaborately. In this review, over 9474 reported lentinan-associated cancer treatment cases are evaluated and summarized from 135 independent studies in China during the past 12 years (2004-2016)... Overall clinical data show solid effect of lentinan on improving the quality of life and on promoting the efficacy of chemotherapy and radiation therapy during cancer treatment."

- Oct. 2017, Cancer Medicine (Chinese study), 'Efficacy of biological response modifier lentinan with chemotherapy for advanced cancer: a meta-analysis': *" This study was sought to evaluate the efficacy of adjuvant lentinan combined with chemotherapy for advanced cancer. ... No significant difference were found in 2-year survival rate. Adjuvant lentinan used with chemotherapy achieved improvements in 1-year survival rate, response rate, and adverse events in advanced cancer."*
- Jan. 3, 2024, European Journal of Medical Research (Chinese study), 'Lentinan progress in inflammatory diseases and tumor diseases': *"Shiitake mushrooms are a fungal food that has been recorded in Chinese medicine to nourish the blood and qi. Lentinan (lLNT) is an active substance extracted from shiitake mushrooms [and] plays an important role in the treatment of inflammatory diseases as well as oncological diseases. Moreover, clinical experiments have confirmed that LNT combined with chemotherapy drugs has a significant effect in improving the prognosis of patients..."*

- At least once you have prostate cancer, basic, cheaper White Mushroom extract gives you a greater chance of stabilizing or removing the cancer (1 in 18) than Shiitake mushroom extract (0 out 61):

  Oct. 2002, Urology journal, 'Effects of a mushroom mycelium extract on the treatment of prostate cancer': *"Objectives: To determine whether supplemental amounts of a polysaccharide/oligosaccharide complex obtained from a shiitake mushroom extract (SME) would lower the prostate-specific antigen (PSA) level in patients with prostate cancer. ... the final results for our study patients were 0 with a complete response, 0 with a partial response, 4 (7%) with stable disease, and 23 of 61 with progression while taking SME. [Hence] SME alone is ineffective in the treatment of clinical prostate cancer."*

Turkey Tail

- Turkey Tail mushrooms grows on almost all continents. The name isn't a reference to the country, but to the bird. In the Netherlands the mushroom is called Fairy Bench (Elfenbankje).
- It's a mushroom that a lot of people use alongside chemotherapy, because the idea is that it fights cancer. Most people in comment sections though either die, or one has to assume the chemotherapy, radiation and surgeries saved them. Some saw remission, but seemingly always in combination with chemotherapy. Hence, Turkey Tail mushroom might be similarly beneficial for cancer patients as has been demonstrated with Shiitake, and partly white mushrooms. It certainly is no Fenbendazole in terms of fighting cancer.
- Others use it to help prevent cancer, which a Japanese study showed other mushrooms can also do to an extent (10% less chance with pancreatic cancer).
- Experiences:
  - YouTube comment: *"I'm using a turkey tail tincture. After one day. I noticed my sciatic nerve issue has almost completely gone away. Now on day three. Still the same. I feel like it's maybe resolving inflamed intestines which was putting pressure on my sciatic."*
  - Not a whole lot to be found.

OILS

Black seed oil

- Oil manufactured from the seeds of the Nigella Sativa plant, a medicinal plant used a lot in Unani and Tibb, Ayurveda and Siddha systems. The seed and oil have antimicrobial effect against bacteria as candida and Staphylococcus.
- Not studied in detail.
- Studies:
  - May 2013, Asian Pacific Journal of Tropical Biomedicine, 'A review on therapeutic potential of Nigella sativa: A miracle herb'.
  - Jan. 2015, Journal of Pharmaceutical Sciences and Research, 'Effect of Nigella Sativa Seed Powder on Testosterone and LH levels in Sterptozotocine Induced Diabetes male Albino Rats': *"Conclusion – Compared with normal rats the level of testosterone was decreased in diabetic rats, when it is treated with Nigella Sativa Seed powder the levels of testosterone increased significantly. ... Results – Testosterone(ng/dl) level of*

Normal Control rats was 82.78±8.26, Diabetic rats was 41.62±7.28 and treated with Nigella Sativa rats was 71.34±6.58. LH(mIU/L) [a 70% increase]..."

CBD oil

- Not researched in detail yet.
- Unlike many CBD oil, Rick Simpson Oil is high in tetrahydrocannabinol (THC).
- CBD oil often is sold in 30ml bottles. It is generally recommended you drop 1 to 4ml a day under the tongue.
- CBD oil compounds apparently make it harder for cancer to spread. Endstage metatastic cancer survivor Joe Tippens used non-THC-containing CBD oil in his successful treatment, but by far the main component that seems to have save him was Fenbendazole. He does, however, have some insights on CBD oil for cancer treatment:
  - mycancerstory.rocks/81-2/ (accessed: Nov. 18, 2022; Joe Tippens' official site): *"IMPORTANT: I will not receive any financial remuneration from this company for the sale of these products and I do not own any stock of the company. ...*
    ***Pathway 1:** CBD Tincture: CBD has always been part of my protocol, but the new product will incorporate some important changes. As we have learned more about the potential benefits of hemp extracts we have discovered that the species of hemp, the methods of its extraction, the ratios of acidic forms of cannabinoids to non-acidic forms of cannabinoids all play a critical role in how well Hemp extracts can have on cancer outcomes.*
    In my research of Hemp extracts – Onco Adjunct Pathway 1 – product hits all of the important qualities for a hemp extract. First the product is cryoextracted, this preserves the terpenes and the non-decarboxylated cannabinoids. Second, this product uses a proprietary strain of cannabinoid that has actually been tested on cancer cell lines. And Third, they supplement the CBGa cannabinoid to standardize it up to 7mg per dose, something that I believe could be significant. Finally, they add in two other important ingredients, the first being Frankincense, an iconic material dating back to the biblical times and recently the topic of a ton of cancer research. The company's work on Frankincense focused on a collaboration with Dr HK Lin, the iconic researcher who studied Frankincense as a supplement for cancer for more than a decade. Together they developed an approach that uses specific fractions of Frankincense that are the most beneficial,

according to his research. Finally, a Nano molecule carrier, C60 has evidence to show that it could help significantly with low dose chemotherapy, reducing the rtoxicity of chemo to healthy cells and increasing the toxicity to unhealthy cells.

The Onco Adjunct Pathway 1 is a unique combination of Cryo Extracted Hemp, with Middle Eastern frankincense essential oils and the Nano C60 carrier, all in one tincture. Some people may wish to stay with the previously recommended Forgotten Trails CBD from Pharmacy Plus at mcadoorandy@gmail.com and they will continue to supply that as well."

- forgottentrailscbd.com/products/ (accessed: May 27, 2024): *"CBD Tincture: 750 mg Broad Spectrum [30 mln bottle]. Our broad-spectrum CBD tincture contains 0.0% THC, while still maintaining therapeutic levels of other naturally occurring cannabinoids, terpenes, and hemp-derived essential oils. Dissolved in a mixture of MCT, grapeseed, and hempseed oil, our unflavored tinctures provide the true "essence" of the hemp plant.*

  Suggested use: Administer 1ml oil under the tongue, holding for 90 seconds. Then swallow the oil as an herbal supplement. Or take as directed by a healthcare professional.

  Ingredients: MCT, Broad Spectrum CBD Oil, Hempseed Oil, & Grapeseed Oil."

- Rick Simpson Oil, which contains THC, has been credited with anti-cancer benefits as well. It is particularly recommended for brain cancer. However, the few videos I have seen of people treating themselves with Rick Simpson Oil all died. In all fairness though, it may well be that Kristina Marie, who lived for about 7 years after diagnosis with a pretty decent quality of life, was able to greatly slow the progression of the cancer with RSO treatment:
  - Sep. 8, 2011 final YouTube upload by 'Alrishsurvivor', 'My Journey with cancer-Rick simpson oil#16': *"I got my results back from my MRI. My tumor has doubled in size. The oil had no positive effects. Kinda sucks."*
  - March 31, 2017 YouTube upload by 'GBM army' (died 1.5 years later without after one continuous decline), 'Coping with brain cancer glioblastoma GBM G1GB talking about rick Simpson oil rso': *"The Rick Simpson Oil makes my whole left side tingly. And the more I do, the more tingly it gets. ... That actually got a lot better when ... they started to taper off the steroids. ... It's still enough to keep me awake [though]."*
  - June 13, 2018, Lat YouTube upload by 'Kristina Marie' (died within year; diagnozed with a brain tumor in May 2012, and reported to have halted its rapid growth on June 1, 2015 with Rick Simpson Oil, after an MRI; reported feeling good on Triphala Guggulu, Chitra, and Ajwain seeds about 2 years

before her death), 'June 12, 2018': *"I just wanted to tell you that I'm doing a lot better. I'm on a ketogenic diet now, so I have been feeling SO much better. But going into that stage was like SO painful. ... But I still have issues. ... I totally have vitamins in my systems, taken [CBD] oil and smoking [weed]."*

Castor oil

- Castor oil is produced from the "beans"/seeds of the flowering plant Ricinus communis. In places as the Netherlands known as "wonderolie" (miracle oil), from the wonder tree (miracle tree).
- The oil already was used by the Ancient Egyptians, by the Indians in the Ayurveda system, and by other people around the world well before the modern medicine era. At least in the United States during the early to mid 20th century, a popular way to punish children was make them drink a teaspoon of castor oil. That type of punishment even was in the popular Tom & Jerry cartoon. It also was seen as a cure-all.
  - 50-70 CE, Pedanius Dioscorides (a Greek physician in the Roman army), 'De Materia Medica', '1-38. KIKINON ELAION' (this is thought to be castor oil): *"Cicinum [the Latin name] is prepared as follows. ... Take the kettle from the fire and collect the oil that swims on top with a spoon and bottle it. Because the Egyptians use it in great abundance they prepare it differently. After they have picked them, they place the seeds into a mill and grind them carefully; then throwing the grinds into baskets they squeeze it out with a press. ... This oil of cicinum is good for ulcers that penetrate the head, parasitical skin diseases, inflammation of the perineum, and obstructions and damage to the uterus, as well as scars faedas [from goring by horned animals], and earache. Mixed with plasters it makes them more effective. Taken as a drink it draws out watery matter through the bowels, and it also draws out worms."*
- Ricine poison, contained within the castor seeds, is very deadly, but dissolves in water and is automatically removed from the castor oil during the extraction process.
- Castor oil has antimicrobial properties, and some anti-fungi and very-limited anti-viral properties. The MIC (Minimum Inhibitory Concentration) often is 100s to over 1000x higher than garlic's allicin. Traditionally it has been used as a laxative, wound healing, joint and tendon pain, eyes issues, livestock issues, for inducing labour, etc.
- Castor oil very strongly is associated with eye improvement. Users claim it has cured or improved their cataracts, eye floaters, dry eyes,

eye puffiness, dark eye circles, etc. Partly this has been confirmed by science.

- A lot of women use it to hydrate their skin, and also to make their eyelashes and eyebrow hairs look or grow thicker and grow a bit longer. It even appears it can grow eyelashes and eyebrow hairs from nothing. Most report seeing results after 3 weeks to a month. Some mix it with rose hip, or prefer rosemary oil instead.
- Castor oil if often used in pharmaceutical eyedrops, but generally only at 2% strength.
- Some people have reported getting rid of eye floaters by rubbing castor oil on their eyelids at night.
- Studies showing a host of benefits of rubbing castor on the eyelids:
  - Jan. 2021, The Ocular Surface journal, pp. 145-150, 'Randomized trial of topical periocular castor oil treatment for blepharitis': *"14 females, 12 males ... with clinical signs of blepharitis were enrolled in a ... trial. A 100% cold pressed castor oil formulation ... was applied to the eyelids of one eye (randomized), twice daily for 4 weeks. ... Clinical improvements in eyelid margin thickening, telangiectasia [red spider veins on the eyeball], eyelash matting, madarosis [loss of eyelashes or eyebrows], cylindrical dandruff, and lid wiper epitheliopathy [nflammatory condition of the eyelid] were limited to treated eyes (all p < 0.01), while greater decreases in staphylococcal and seborrheic eyelash crusting were observed in treated than control eyes (both p < 0.05). No adverse events were reported during the treatment period. ... Castor oil demonstrates promise as a potential treatment for blepharitis..."*
- As a word of warning for what can be found below, a study showed that (seemingly undiluted, pure) castor oil is cytotoxic to the cells of the white part of the eye (the sclera or conjunctival cells) in a variety of ways. However, this was only demonstrated in vitro. A subsequent real world in vivo test revealed no signs of irriration of the eye when castor oil was applied. The likely reasons for that are defense mechanisms and fluid diluting and slowly removing the oil.
  - Nov. 2007, Investigative Ophthalmology & Visual Science, 'Benefits and side effects of different vegetable oil vectors on apoptosis, oxidative stress, and P2X7 cell death receptor activation'
  - **This author:** I tossed pure castor oil in my eyes before going to sleep four nights in a row. On the fourth night I got out to work on the PC and noticed my eyes were a bit red and heavy. I was very tied at that point, but still would say my eyes were way too red for it to be normal. So I suspect the castor oil, with repeated use, does have a habit of mildly irritating the eye. Occasionally dropping 100% castor oil in, seems fine. But do not overdo it.

- Castor oil experiences with improving and eye floaters, eye dryness, cataracts, double vision, etc., as well as thicking eyebrows and eyelashes (there are many, many more than listed here):
  - **YouTube comment:** *"Organic Hexane free Castor Oil in the Eyes dissolves Cataracts. Two to three drops in each Eye before bed for three days is all you need for a year or more. I've been doing this for over ten years. I''ll be 80 in June. My Ophthalmologist hates me. ... No. Three nights in a row. That's it. Not every week. ... It's quite simple, just put a couple of drops of Organic Hexane free Castor Oil in each Eye before lying down to sleep. If you need it, your Eyes may itch a bit for a few minutes. Let it pass. The itching will stop. Repeat the next two nights. That's it. Any Castor Oil that flows out of the Eye or misses can just be rubbed in around your Eyes. I do this annually or when I think I need it which is not often."*
  - **YouTube comment:** *"Just because there's not a study for something doesn't mean it doesn't work. There are many, including myself, who are seeing improvement in our floaters [due to rubbing castor oil on the eyelids], etc."*
  - **YouTube comment:** *"My eye Doctor said I was forming a cataract, and I started using 100% organic castor oil on my eyelids every two weeks. 6 months later, my eyes were checked, and the cataract did not continue to form. Now three years later still no cataracts, and I continue to use the castor oil once a month!!! I am 65 years old."*
  - **YouTube comment:** *"I been using castor oil on my eyelids and under eyes for about 6 months and it's helped my dry eyes and seen reduced swelling of my under eye bags and dark circles 👁 "*
  - **YouTube comment:** *"I've just started castor oil on my whole face, including my eye lids at night. I let it soak in overnight. My face is already less wrinkled, and my dry eyes are way better. Not to mention my under eye, bags are gone, and my brows are finally growing. Castor oil has all the best anti-s, inflammatory, fungal, and biotic."*
  - **YouTube comment:** *"I was in an accident and the car glass shattered and went in my eye. I went to the opthamologist numerous times and they could not find anything but I sure felt something in my eye everyday. They prescribe me prescription drugs and eye wash. I tried everything warm water with salt, water mixed with peroxide even a squeeze of lime nothing worked so I kept on searching [and] I bought an organic castor oil 100% hexane free... when I put one drop in my eye I had immediate relief oh my God thank you so much this is the second day and I put another drop in and I can tell you*

whatever was bothering my eye is almost 100% completely healed now thank you Jesus!"

- **YouTube comment:** *"[I] had a bad fall, fractured my nose and both eye sockets TBI. Stitches in left eyebrow. ... Didn't have eyebrow or lashes on the left. I'm 65... 6 months later, using just [castor oil] at bedtime, eyebrow and lashes are back. Also, noticed about a month or so ago, I am not seeing so many bugs flying around.. Had a lot of floaters... I have a significant astigmatism and myopia. Had it since they found I needed glasses at age 8. I just received report from my eye doctor that I had a slight improvement. ... Eye bags and wrinkles are better too. So, I think it worked for me."*
- **YouTube comment:** *"Purchased 100% organic Castor Oil (cold pressed, no hexane) and I have been using it as an eye drop treatment for my dry eye condition for about 6 months now. I put a drop or two into each eye, every night before I go to sleep. I have noticed very significant relief from the eye watering, stinging and irritation that I used to have, prior to using the Castor Oil. Also, the Castor Oil is significantly cheaper than the prescription eye drops that were recommended by my eye doctor."*
- **YouTube comment:** *"I caught a hawk on my hen 2 weeks ago, pecking at her eye. She survived, thankfully, however he shreded her cornea, and I'm convinced he even dug into the lens. After the panic subsided I decided castor oil would be worth trying and put one drop in her eye. Next day it was cloudy and still torn. The day after that I put another drop into her eye, and on her lids since it appeared he had stretched them out a bit. Within a week, after two doses of castor oil, her eye looks completely healed. She's totally unphased, and grateful!"*
- **YouTube comment:** *"I used castor oil for cataracts and it worked! Blew my eye doctor's mind!"*
- **YouTube comment:** *"My mother knows a elderly woman who was 2 or 3 years ago diagnosed with cataract. She was supposed to get as soon as possible a surgery. She says she put castor oil into the eye and has still no surgery and is doing great."*
- **YouTube comment:** *"I have used castor oil. I had cataracts. The doctor said I would need surgery within a couple of years to I began putting a drop of castro directly into the eye for dry eye. Next next time I went back to the eye Doctors, my eyesight had gotten better both nearsighted and far-sighted and I ask the Doctor about cataracts. He said I didn't see any cataracts.... I contribute this to the castor."*
- **YouTube comment:** *"I use castor oil on my lids. The oil can migrate into the eyes. No need to put drops directly into the*

eyes! Castor oil is pretty amazing. Farmers have used Castor oil for animal cataracts for hundreds of years."

- YouTube comment: *"Towards the end of my chemotherapy, one of the nurses told me to get organic castor oil, and apply a thin film where my eyelashes and eyebrows used to be. They came back SO fast, and I almost regained the double lashes I had before treatment! Now I'm using it on my scalp, to help speed the regrowth of my hair in certain places. It works! At least, it has for me."*
- YouTube comment: *"67 years old. All of a sudden i had been experiencing problems with blurred vision in the morning. Very itchy lids and loss of lashes and eyebrow. Booked eye exams. Recently diagnosed WITH Dry eye. I started to use some castor oil. I have been using castor oil, i have noticed a significant improvement in the occurrence of my blurry vision in the morning. Also, i have noticed that my eyelashes have become longer, and fuller, same with my eyebrows! I applied a drop on both lids and gently message it in before bed. So happy with the results now using on my wrinkles. It's working."*
- YouTube comment: *"I'm 70 years old and my eyebrows were nil and my eyelashes very short. I started using Castor oil on my lashes and eyebrows for the past year. Yes my eyebrows have hair and eyelashes are much longer and thicker."*
- YouTube comment: *"Because of the lock down I couldn't see my eye doctor or have cataract surgery for the cataract I had been diagnosed with. I decided to put a drop of castor oil in my eyes every night before bed. When I finally got to have an eye exam several months later the cataract was gone. That is all the proof I need."*
- YouTube comment: *"It 100% helped grow back my eyelashes after they were practically destroyed from eyelash extensions. I actually grew two layers of lashes on my top lid so they looked thicker than my lashes were pre-extensions."*
- YouTube comment: *"Woke up with half my eye bloodshot. No reason no trauma. I smeared the eye with Organic castor oil and the next day it was 90% cleared up, after my research said it would take 2 weeks. ... The second day it was almost unnoticeable. I've been doing castor oil drops in my eyes for years and the floaters are almost gone. ... 76 year old female."*
- YouTube comment: *"4 years ago I developed blepharitis [note: swelling, itching and other irritation of the eyelids] and had a terrible case. I tried the products I got from my opthalmologists and it didn't get rid of it. 2 years ago I decided to rub castor oil all over my eyelid and under eye every night. ... A little even got into my eyes after applying it nightly for weeks. Each week I*

noticed the inflammation coming down and there was less and less crusting. After a month or 6 weeks it was cleared up. When I stopped using the oil I did warm water compresses every single morning and to this day continue. I currently don't have Blepharitis but came upon your video."

- **YouTube comment:** *"I am a makeup consultant. I have SEVERAL clients who said Castor oil definitely made eyelashes and eyebrows grow!!"*
- **YouTube comment:** *"Well it isn't a placebo effect regarding floaters. I just recently had an eye exam because I had really bad increased floaters, with flashes of light in my right eye. ... It got so bad I could hardly see. (Which escalated rather quickly) I saw optometrist and ... said I needed to be seen again in a month. I heard about castor oil helping dry eyes so I tried it. (Unrelated to the floaters) It helped immediately. I was thrilled. A few weeks later of nightly application to my eyelids I realized my floaters were GONE. Not just better. ... No... entirely GONE."*
- **YouTube comment:** *"Castor oil also did it for me. Floaters gone. ... Consistent aplication at night over eye lids. By morning if not all absorbed wash rag it off. I didn't have them for long so it only took 3 months of this practice for the floaters to vanish. Its been about 3 month now without floaters."*
- **YouTube comment:** *"I was skeptical about using Castor oil for floaters but honestly after only a week of using morning and night under eyes they are GONE❤ what a blessing!!"*
- **YouTube comment:** *"I've used it myself on my eye balls at night and I dont need glasses anymore. Took me one year at 100 %."*
- **YouTube comment:** *"I used castor oil on my aged dogs eyes years ago. They were getting that graying glaze over them. He'd fight me at first, but seemed to realize soon after that it was helping him because he started assuming the position to get the drops not long after. I never got that surrender from him with trimming his nails in all 8 years he was alive. His eyes went from that of an old dog looking like he was starting to go blind, to the young pup I remembered him to be. No film, no glowing graying. They were clear and green (his normal color) again and showed zero signs of aging."*
- **YouTube comment:** *"I have used castor oil on my lashes and eye brows because of loss of hair due to chemo. I noticed , just a little, growth on my brows and lashes. But, the main thing I've noticed lately is the floaters in my eyes have almost disappeared. I wasn't expecting it and was a total surprise when I realized the floaters had disappeared!"*
- **YouTube comment:** *"I've been using castor oil on my eye lid for about two months, I felt like there's improvements with vision and dry eyes. I just had my vision check up few weeks ago...*

She said that there's improvements, basically great results. I do not have to wear glasses or contacts unless really needed. I then told her that I've been using castor oil, she lost it... I told her that I'm confused as she gave me great news for improvement, she shook her head and said no. ... I've been with them for seven years and it's insane."

- YouTube comment: *"I haven't put it in my eyes ,however I've been putting it around my eyes have found that it has improved my eye bags and I think it has helped my severe dry eye."*
- YouTube comment: *"I have had chronic dry eyes for years. I'm 73. My Dr. said, I could use eye drops 6 times a day. Well, it never worked. 3 months ago I started using castor oil on my eye lids. NOT one time have I had to use eye drops ever again. Every night I wipe a dab over my eye lids. I'm so very happy no more dry eye. I started using castor oil on my nose scar. It is changing my scare to look so much better. This really works."*
- YouTube comment: *"I've used castor oil ever since I was diagnosed with MGD [Meibomian gland dysfunction] 6 months ago. I put it on my eyelids and then use an eye wand which emits heat and massage. Started doing it 3-4 times a day, now down to once every few days. All issues have disappeared. My ophthalmologist was disappointed as he was unable to 'sell' me the office procedure for $1500.00."*
- YouTube comment: *"For me: It works for deep wrinkles, eye bags and under eye darkness. I vote yes."*
- YouTube comment: *"I have used castor oil around my eyes for a few months now. I haven't had dry eye. I had floaters in my left eye. i only have one tiny one now. I have never put it in my eye."*
- YouTube comment: *"I started using castor oil because I was diagnosed with glaucoma and cataracts. I was told, and operate or use a product that would change my blue eyes brown forever. I looked for alternatives. The testimonials were exciting. Eight months ago I put the drops of castor oil in my eyes first and then on my lids because of the blurry vision and not being able to get to sleep afterwards. I noticed first that my glasses were too strong and started using an old pair. I'm now using a 3 yr old pair of glasses. My doctor said that I don't need surgery for glaucoma and cataracts.... but getting him to tell me my vision has improved was like pulling teeth. lol. I let him see my last, 2 yr old and 3 yr old glasses and showed him what I was using. He still insisted that I can get a new pair and make them clearer. I said, no thank you....and goodbye. FYI: I'm also noticing that it removed the brown spots on my skin that has been happening since I'm now 75. The one on my face was gone*

in a week. That's exactly what I needed to know and I'm thrilled."

- **YouTube comment:** *"I'm 61 and I had uncontrolled dry eyes and blephoritist. I went to my doctor and I didn't get much relief. I had my wife drop 2 drops of 100% castor oil in each eye before I went to bed. My blephoritist went away after a few days and my dry eyes no longer bothers me."*
- **YouTube comment:** *"My spouse and I both were diagnosed with cataracts and last year the eye doctor said his were ready to come out. We started using castor oil for eyes. This year he was told his cataracts were much reduced and mine were, for the first time in years, never mentioned. A few days after using the oil, I noticed colors seemed a little brighter. Also, my vision itself is much improved. I was told years ago when I asked what my vision was, the doctor said, "Legally blind is 20/400 and you're way beyond that." While I am prescribed contacts, there are days I forget to use them because I can see so clearly. That usually changes by the end of the day, but it's still a huge difference! Also, my prescription for contacts has decreased over years."*
- **YouTube comment:** *"Ive used castor pil on my eye lashes and since i had cataract on my left eye its now gone. It does wonders"*
- **YouTube comment:** *"I am VietNamese Opthalmologist. Six years ago , I have severe dry eye syndrome and I use castor oil to drop in my eye. My eye heals completely after 3 months."*
- **YouTube comment:** *"I'm 79 and have been using castor oil for about 6 months around my eyes at night before bed because my eyelashes were thinning and I'd been diagnosed with cataracts. I'd been experiencing the beginning of double vision and was really frustrated about that. Recently in addition to my eyelashes begining to grow back in, I've noticed the double vision seems to be much less. I had been wearing eyeglasses since I was thirteen but now I only wear them to drive. I read normal size print online and on my phone without any difficulty. And after watching this video, I realize that the floaters I've had for years are also diminishing!"*
- **YouTube comment:** *"Your information is unfounded. I tried it for dry eyes and floaters and works for me."*
- **YouTube comment:** *"I have been using castor oil on my lids. From just doing this every night for a month. All 5 of my eye floaters are gone. My vision is now improved."*
- **YouTube comment:** *"Im 67 got headaches from cataract specially one eye... since I have Organic Castor oil cold pressed Hexane free in glass bottle used for 2 weeks on my eye lids and lashes my vision have so much improved and my eyes are not*

dry nomore its amazing and have no headaches nomore im so happy!!!!"

- **YouTube comment:** *"My vision has improved no more floaters and I don't have that cataract anymore so I continue to use [castor oil]."*
- **YouTube comment:** *"My dog had cataracts and I started putting one drop of castor oil in his eyes twice a day full strength it cleared up in a month!"*
- **YouTube comment:** *"I have sjogrens syndrome and therefore extremely dry eyes. Castor oil has absolutely been a miracle for dry eye AND my lashes. Also, when I have eye infections (often from leaving my contacts in eyes-purple-crying) it clears up almost overnight! I recomend it for a TON of ailments. Thank you for the video!"*
- **YouTube comment:** *"Dont listen to these useless doctors. I can tell you straight up for eye floaters that when I put pure castor oil hexane free cold pressed reduces them almost to 75%! I put one drop in each eye once a week pure and have absolutely no issues!"*
- **YouTube comment:** *"I've seen many comments from people saying castor oil got rid of their floaters, across several different castor oil videos. Most or all of them said it worked by just using it on their eyelids."*
- **YouTube comment:** *"[After using castor oil] my Dr wondered what I'd been doing?!! My eyes were no longer dry, my cataracts shrunk in size, my vision had actually improved!"*
- **YouTube comment:** *"I had floaters, so annoying. Then I started drinking a 1/4 tspn of castor oil for 30 days, no more floaters."*
- **YouTube comment:** *"I have been suing castor oil under my eyes and on my eyelids since August 2023 on a consistent basis mostly twice a day and I have noticed significant improvement with my dry eyes, eye strain, eye floaters are completely gone, have seen growth on my eyelashes and improvement with my eye bags."*
- **YouTube comment:** *"I've been using it on my eyelids for several months and it seems I've regained my long range sight."*
- **YouTube comment:** *"For 2 years I suffer from severe dry eye -- treated by a specialist with different Rx's and procedures. 6 months ago I resorted to trying caster oil kind of as a last resort and OMG it's a life changer. Immediate incredible relief. I don't drop it directly in my eye, but around the lashes and on lids so some of it does get into the eye. But the instant relief is incredible."*

- Castor oil experiences with improving and curing tendon and arthritic/joint pain:

- **Reddit comment:** *"My parents still use castor oil to help with their joint pains and they swear by it! (They just rub it on, they don't digest it.)"*
- **Reddit comment:** *"I've been putting it all over my body daily (it's a chore) but some things it helped where: completely healed the daily pain I had in my neck from nerve inflammation and arthritis. I was getting headaches daily from the neck pain for about a year, nothing my physical therapist did or my doctor prescribed helped relieve the pain. Since using castor oil the headaches and pain are gone. I no longer have to take ibuprofen the minute I wake up each morning. I pour a little in my belly button each night or rub it all over my stomach and it has helped relieve my constipation too. It is a natural anti-inflammatory."*
- **Reddit comment:** *"I got [ACL] surgery 38 days ago. I've done all the things for inflammation, therapy is going amazing, my swelling isn't bad, but still I have those moments where it just aches! Last night I did my nightly castor oil on my lashes for growth and [decided to] put it on my entire knee area. I WOKE UP TODAY WITH ZEROOOOO PAIN. Usually I'm sort of uncomfortable/stiff/achey those first few steps in the morning. Not today!!! Then this morning I had a grueling PT session so I rested for a while.... Again normally quite stiff after a period of rest. I decided to slap on some castor oil before I started walking just to see... ZERO PAIN. I implore you to try it!! And if nothing else, it's great for your skin and your scars. But I haven't felt this good since surgery, especially after a workout."*
- **Reddit comment:** *"I just wanted to say thanks for the tip. I tore my ACL 10 years ago but just found out in the middle of COVID. We have a 20 month old now so I haven't been about to have surgery but I've been having lots of pain. I've been using castor oil the last couple of nights and it's helped immensely. I used turmeric before but I think it helped more with inflammation inside the body. Not so much at surface level, where my pain has been."*
- **Reddit comment:** *"I actually bought castor oil 2 weeks ago for skin care.. The crazy thing is the third night after applying it to my face .. I woke up and I could see out of my right eye.. the eye I had retinal detachment surgery on and very poor vision.. previous to surgery I was 20/20."*

- Castor oil experiences with improving or healing skin disorders and various remaining issues:
  - **YouTube comment:** *"I know use castor oil thanks to you! It's gotten rid of a burn scar I had and I'm enjoying other benefits from it too."*

- **YouTube comment:** *"I had skin rashes and skin marks from Lupus. I ditch all body creams and start making my own concotion of castor oil, jojoba oil and frankincense oil. My skin is now so glowy and healthy with no visible marks."*
- **Reddit comment:** *"I'm a 30 y/o with psoriatic arthritis and I swear by [castor oil] too."*
- **Reddit comment:** *"If i get bumps or a pimple, castor oil clears it up almost immediately and it has cleared previous hyperpigmentation from breakouts. I have also noticed my skin is firmer, tighter, and brighter. I use it as a final layer after all my serums and moisturizer. I feel it is making my other products penetrate deeper and making them more effective. It's really significant!"*
- **Reddit comment:** *"I'm 48 years old and have been using castor oil on my face and body since my twenties...something I learned from my mom. I have zero dark spots, no stretch marks (I have two children), no crepey skin anywhere and I still get ID'd for alcohol sometimes. My son is 20 and people often assume I'm his gf (which obviously makes us both super uncomfortable) I also do Botox and microneedling so that's a factor as well of course but I honestly attribute most of my great skin (and hair!) to the castor oil. But everyone is different and skin reactions are going to vary of course."*
- **Reddit comment:** *"I had the same issues with [skin] healing [as you after a mole and eczema were removed]. Been using this castor oil 2x a day and it's helping it heal so much better than Aquaphor."*
- **YouTube comment:** *"I bought a bottle for my mom to use on some large skin tags she had on her forehead. Yes, the tags were reduced and eventually disappeared."*
- **Reddit comment:** *"After binging Halloween candy, my mom would have us take a teaspoon of this stuff. It was the worst. Never had a stomachache."*
- **Reddit comment:** *"[I] now only use castor oil everywhere...it heals cuts & scrapes, burns, and is fantastic for reducing wrinkles and adding plumpness in the skin."*
- **Reddit comment:** *"Castor oil on my eye lids helped my blepharitis and dry eyes. It's amazing stuff."*
- **Reddit comment:** *"I used castor oil on my eyelids every night for a couple of months. My next visit to my optician was very interesting! On examining my eyes he told me my macular degeneration was getting better! I told him I was using castor oil on my eyelids! He said I have never seen this before and suggested I keep using it."*

    - **Reddit comment:** *"I had a real eye-pain for several weeks. When I went to the doctor at least 3 times with this, he repeatedly said, that is only caused by dry eyes, so he immidiately subscrided me different and not cheap drops. But they didn´t help me. I started to worry about it, than normally I help myself with euphrasia drops, but nothing helped. Than I came to some videos, where they suggested to put castor oil on the eyelid to penetrate into the skin. So I bougt a bottle of coldpressed castor oil in the pharmacy and gave it a try. Already the next morning was my pain blowing away and it still remained. Whenever I experiencing dry eyes again, I put some castor oil on my eyelids before bed and it works perfect!!! Therefor I am very greatfull and giving this tip further to my friends."*
- Bad experiences:
    - One person used castor oil daily on her face. After two weeks it exploded Malassezia fungal acne on her face. This makes sense, as Malassezia can feed on fatty acids in the C11–C24 range - with castor oil's ricinoleic acid being an 18-carbon fatty acid (C18), sitting right in the middle of that range. Then again, olive oil and coconut oil will also feed it. Squalane and jojoba oil are just about the only natural options for these people. The petroleum-based vaseline is another.
    - **Reddit comment:** *"I was using it on hair. It gave me forehead acne."*
    - **YouTube comment:** *"I have blepharitis and had 4 Intense Pulsed Light treatments (IPL) which helped with my tear evaporation. However, most of my top lid eyelashes were burnt. I used Jamaican caster oil to try to grow my eyelashes. After about 3 weeks of applying it at night before bed I developed a nasty stye on my top eyelid. After months of trying to reduce the stye through many different methods I had to have eyelid surgery. While castor oil sounds promising I've learnt my lesson the hard way."*

Cinnamon and cinnamon bark oil

- Very potent anti-bacteriological, anti-fungal, anti-viral and anti-insectine.
- Wondering if cinnamon oil's powerful anti-microbial and anti-influenza properties can't be put to good use as an anti-viral - also because oral supplements as thyme, oregano, NAC, nattokinase, bromelain and quercetin make it to the sinuses - it turns out that cinnamon bark oil apparently has been used as an effective cure to influenza before the age of antibiotics:

- Oct. 23, 1906, Withington-based, University of Edinburgh-educated Dr. Joseph Carne Ross to the editors of The Lancet (peer-reviewed general medical journal, founded in 1823), 'Cinnamon Oil In The Treatment Of Influenza': *"Allow me ... to call the serious attention ... to the excellent results that, as far as I can judge, follow if influenza is treated systematically with cinnamon oil. For nearly 16 years I have employed cinnamon in various forms in treating this disease, but for many years now I have always used the oil of Ceylon cinnamon bark.*
  There is another oil of cinnamon on the market, extracted, I believe, from the leaves of the plant, which though rather cheaper should be avoided and the oil of cinnamon bark only shouldbe used.
  We all of us have heard only too often of sad cases of influenza where the unhappy patients have been confined to their beds or their rooms for a fortnight [two weeks], three weeks, a month, or even longer. ... I am perfectly convinced that it ought never to occur. I employ these words advisedly. ... Now for nearly 16 years [due to a series of coincidences] I have invariably treated influenza with cinnamon, my patients have generally been perfectly fit to return to their avocations, whatever they may have been, within three or four days, and that in no single case has a patient suffering from influenza been on my hands for more than the inside of a week.
  The treatment ... is abundantly simple and is as follows. Let the influenza patient take 12 drops of cinnamon [bark] oil and repeat the dose in an hour; two hours after this second dose let the patient take ten drops of the oil, and then let him go on taking ten drops every two hours without intermission till the temperature falls to normal. And after the temperature has fallen to normal, or possibly a little under, let the patient take ten drops of the oil three times a day for a day or two. ...
  Each dose of cinnamon oil should be taken in half a wine-glass or a wine-glass of water to lessen its pungent taste. It is hardly necessary for me to add, perhaps, that Ceylon cinnamon bark oil can be easily obtained from any respectable druggist in any town. ...
  In every disease, probably, the sooner the patient is placed under treatment the better, and this is pre-eminently the case in influenza. And if a patient suffering from this disease is systematically treated with cinnamon oil in the manner above described within three or four hours from the onset of the disease I think it will probably be found that the temperature will have returned to normal within 12 hours; but if the patient is not put under treatment for a couple of days it will probably

be at least 24 or 30 hours before the temperature becomes normal. After the temperature has fallen to normal the patient should remain in his room for at least 24 hoursand if possible should remain indoors for a further period of two or three days. But many cases that had been submitted early to treatment, cases of robust persons under 40 years of age and whose engagements were pressing, I have permitted to return to their occupations after only 24 hours' rest, and so far without any untoward result. But I always advise that patients should remain indoors for two or three days if they possibly can."

- Oct.-Dec. 2020, 'A cinnamon-derived procyanidin type-A compound': *"In the present review, I am demonstrating new drug discovery history from small molecules of botanical extract (Cinnamon) on wide ranges of respiratory viruses. Researches are targeting the binding mechanisms to block viral capture and entry to the human body. This standardized unique Cinnamon extract has been tested on several virus models and is currently under investigation against COVID-19 (pre-clinical) as a new drug candidate program in Australia."*
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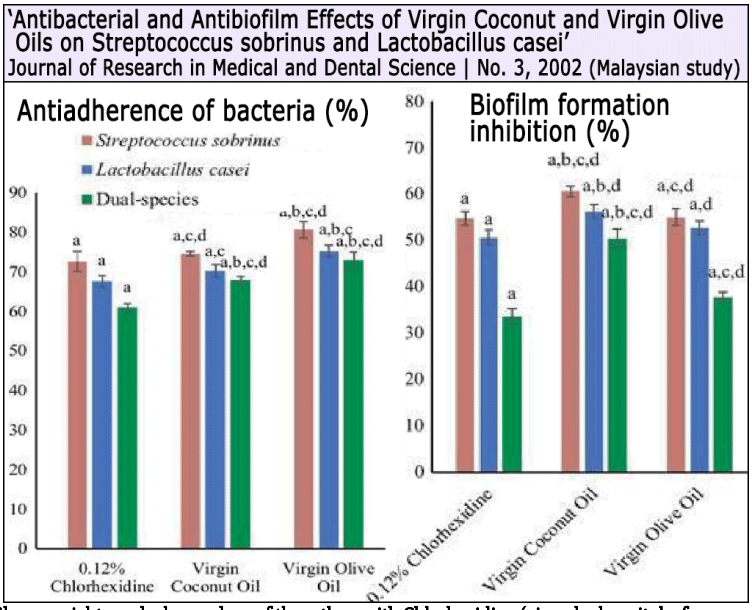
- Studies:
  - 2016, Journal of Plant Protection Research, 'Antifungal activity of essential oils on Aspergillus parasiticus isolated from peanuts': *"The agar dilution method was used to test the antifungal activity of essential oils against this form of A. parasiticus at various concentrations: 500; 1,000; 1,500; 2,000; 2,500 ppm. Among the seventeen essential oils tested, the antifungal effect of cinnamon, lemongrass, clove and thyme resulted in complete inhibition of mycelial growth. Cinnamon oil inhibited mycelial growth at ≥ 1,000 ppm, lemongrass and clove oils at ≥ 1,500 ppm and thyme at 2,500 ppm. However, cedar wood, citronella, cumin and peppermint oils showed partial inhibition of mycelial growth. Eucalyptus oil, on the other hand, had less antifungal properties against growth of A. parasiticus, irrespective of its concentration. ... These findings clearly indicate that essential oils may find a practical application in controlling the growth of A. parasiticus in stored peanuts."*

Clove oil

- Aromatic flower buds of the Syzygium aromaticum tree, part of the Myrtaceae / myrtle family. It natively grows in the Maluku / Moluccas Islands of Indonesia. It's one of the spices / herbs brought over to the West by the Dutch East-India company. In Dutch "clove" is called "kruidnagel", with the islands being known as the Molukken.
- The major downside of the oil, similar to a lot of other oils, is that it irritates the human skin.
- Completely inhibits the growth of black fungus Aspergillus Niger (Lemongrass oil might be even more potent here), but doesn't kill it:
  - April 5, 2020, Scientia Horticulturae (Science Direct), 'Antifungal effects of essential oils against Aspergillus niger in vitro and in vivo on pomegranate (Punica granatum) fruits': *"The in vitro results showed that the growth of A. niger was completely inhibited by the application of clove oil at concentrations of 200 [0.2 mL, or 4 drops], 400 [0.4 mL, or 8 drops], 600 [0.6 mL, or 12 drops], and 800 µL [0.8 mL, or 16 drops - with 1,000 milliliters being 1 liter, and 1 mL equaling about 20 drops]. L–1 on the first and tenth days as well as thyme application with concentrations of 800 µL [0.8 mL]. L–1 on the tenth day. ... The present study suggests that the use of essential oils especially thymus and clove may be a useful alternative to the use of synthetic fungicides."*
- More research needed.

Coconut oil


'Antibacterial and Antibiofilm Effects of Virgin Coconut and Virgin Olive Oils on Streptococcus sobrinus and Lactobacillus casei'
Journal of Research in Medical and Dental Science | No. 3, 2002 (Malaysian study)
Antiadherence of bacteria (%)
Streptococcus sobrinus
Lactobacillus casei
Dual-species
0.12% Chlorhexidine
Virgin Coconut Oil
Virgin Olive Oil
Biofilm formation inhibition (%)
0.12% Chlorhexidine
Virgin Coconut Oil
Virgin Olive Oil

While you might need a larger dose of them than with Chlorhexidine (given by hospitals, for example, after wisdom teeth pulling), both extra virgin olive oil and coconut oil are quite strongly antimicrobial against pathogenic bacteria, in this case those found in the mouth.

- Fat difference, per 100g / 100 ml:
  - **Coconut oil:** 6g mono-unsaturated fat. 2g poly-unsaturated fat. 87g saturated fat.
  - **Olive oil:** 73g mono-unsaturated fat. 11g poly-unsaturated fat. 14g saturated fat.
  - **Canola oil:** 59g mono-unsaturated fat: 30g poly-unsaturated. 7g saturated fat.
  - **Sesame oil:** 40g mono-unsaturated fat. 42g poly-unsaturated fat. 14g saturated fat.
  - **Corn oil:** 28g mono-unsaturated fat. 55g poly-unsaturated fat. 13g saturated fat.
  - **Beef:** 8.4g mono-unsaturated fat. 0.7g poly-unsaturated fat. 7.7g saturated fat.
  - **Pork:** 7.6g mono-unsaturated fat. 1.4g poly-unsaturated fat. 6.2g saturated fat.
- Anti-microbial through its lauric and caprylic acids, largely by destroying and inhibiting the biofilms that keep bacteria together and stuck to surfaces. It appears coconut oil is stronger at inhibiting Streptococcus mutans than extra virgin olive oil.
- Daily coconut ingestion can lead to joint inflammation issues, according to some reports.
- However, in other cases a little bit of coconut oil has led people to solve their constipation:
  - **Reddit comment:** *"My wife has been oil pulling for almost a year now. At first she didn't want to spit in the sink (fear of clogging) and just swallowed the stuff when done. After two days of this her lifetime constipation was resolved. The oil is magical in that regard. She now puts coconut oil on almost everything she eats and her bowels move as regular as a Swiss watch."*
- It will also clog the sink when using it as cooking oil, so maybe just not eat it.
- People use it a lot for hair, skin, and in relation to oil pulling. It doesn't work for everyone on hair and skin, but others swear by it:
  - **Reddit comment:** *"I had a really bad sunburn that left me with permanent scarring. Ten years and countless dermatologists later I gave up and started using coconut oil to remove make up/occasionally put into my hair and saw minor improvements.*

    Funny everyone uses it so modestly, I pretty much slather it on my body, preferably in the sauna and after a workout. My skin has improved more than any dematologist recommended oitments or medicine. Also sometimes adding sugar helps exfoliate/scrub out dead skin."
  - **Reddit comment:** *"I use it as a hair mask once a week and love it! It makes my hair soft and shiny. I focus mostly on the tips*

and leave it in overnight, then mix sugar into my shampoo to massage my scalp so it's washed out completely. I think it depends on your type of hair tho (I have thick very straight hair)"

- **Reddit comment:** *"Have you tried different oils, mixes? I stopped using coconut on my hair because i didn't see improvement, it was dry and "crunchy" and just very weird. I've switched to a homemade blend of grapeseed oil, jbco, argan and sweet almond. In the winter I add those to shea butter, whip it and have a glorious cream that keeps my hair super moisturized."*

Oil pulling

A separate article has been created on this, including the listing of hundreds of testimonies.

Garlic oil

- Garlic oil isn't as supremely anti-microbial and anti-viral as allicin, which is generated upon crushing and cutting raw garlic. However, in terms of killing germs, it still should be more powerful than clove oil and sit around the power of thyme oil. Whether the skin can tolerate it better than these oils is a good question. This author will have to experiment in person with all kinds of oils to tell for certain.

Jojoba "oil"

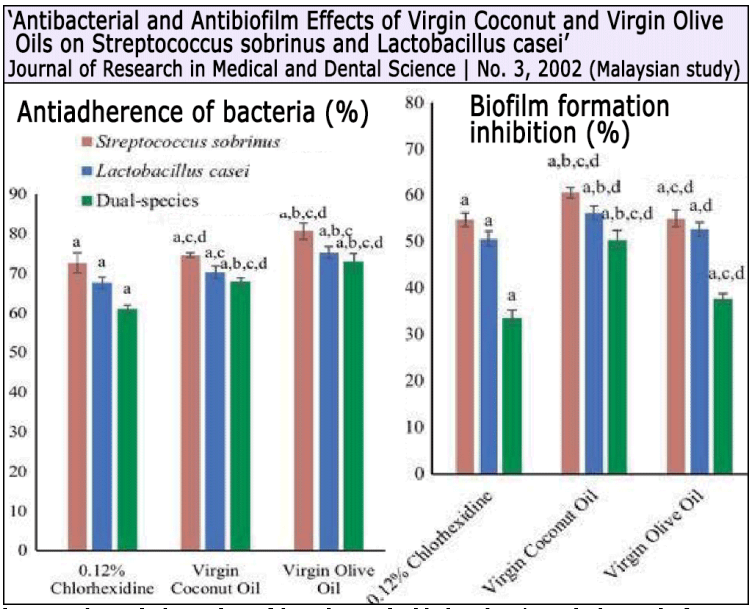
- An "oil" that really is almost pure wax of the same kind that is found in human skin:
  - **Human sebum:** Triglycerides: 41%. Wax esters: 26%. Squalene: 12%. Free fatty acids: 16%. Cholesterol: 3%
  - **Jojoba "oil":** Wax esters: 97%. Triglycerides: 1-2%. Free fatty acids: <1%.
- In contrast to almost all other oils, including olive oil, coconut oil, and castor oil, fungal/yeast acne and seborrheic dermatitis (irritated red skin with flakes, largely caused by Malassezia yeast growing out of control) cannot feed on jojoba oil. These can only feed on fatty acids in the C11–C24 range. Jojoba (apart from the 1-2% triglycerides) and Squalane oils fall outside of that range, in contrast to the afore-mentioned oils.
- The petroleum-based vaseline is another that Malassezia cannot metabolize.

- Due to being wax compatible with the human skin, and acne-producing fungi and yeasts not being able to feed on it, Jojoba is among the safest "oils" to hydrate the skin on a daily basis.

Lemongrass oil

- Anti-microbial and anti-fungal. Strong effect against Candida albicans, Aspergillus niger and Candida tropicalis. Also used to treat ringworm, athlete's foot, jock itch, and MRSA.
- Apparently one of the less irritating oils to human skin compared to a lot of the oils listed here - ignoring safe, neutral oils as coconut and olive oil.
- Research:
  - Oct 25, 2023, Molecules journal, 'In Vitro Antifungal Activity of Selected Essential Oils against Drug-Resistant Clinical Aspergillus spp. Strains': *"Treatment options for aspergillosis include amphotericin B (AMB) and azole compounds, such as itraconazole (ITZ). However, serious side effects related to these antifungal agents are increasingly evident, and resistance continues to increase. ...*
    In this study, we evaluated the antifungal activity of eleven commercial EOs—clove, eucalyptus, geranium, hybrid lavender, lavender, lemon, lemongrass, neroli, oregano, tea tree and red red thyme—in comparison with AMB and ITZ against Aspergillus flavus, A. fumigatus and A. niger clinical isolates. ... Lemongrass EO exhibits the strongest antimicrobial activity with a minimum inhibitory concentration of 0.56 mg/mL and a minimum fungicidal concentration of 2.25–4.5 mg/mL against Aspergillus spp. strains. Clove and geranium EOs were fairly effective in inhibiting Aspergillus spp. growth."
- Mosquito-repellant:
  - Lemongrass-Eucalyptus spray worked just as good a Deet in a TV-broadcasted test: the reporter's arm was not stung at all, while with various other devices - wristbands and tone generators - he received a solid 100 mosquito bites in a short period of time.
    - May 12, 2016 YouTube boardcast by CBS' 'Inside Edition', 'When Tested See Which Repellents Keep Mosquitoes Away Best?'.
  - Promoted as mosquito-repellant by placing a tray with a few drops above a candle. An alternative method is to boil oregano leaves and lemongrass in coconut oil: cook the leaves/twigs until golden-brown. Then let the residu soak into a bottle filled with salt and a whick at the center. (This author has not tested it.)

Olive oil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Antiadherence of bacteria (%)
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Virgin Coconut Oil
Virgin Olive Oil
Biofilm formation inhibition (%)
0.12% Chlorhexidine
Virgin Coconut Oil
Virgin Olive Oil

While you might need a larger dose of them than with Chlorhexidine (given by hospitals, for example, after wisdom teeth pulling), both extra virgin olive oil and coconut oil are quite strongly antimicrobial against pathogenic bacteria, in this case those found in the mouth.

- Popular cooking oil. Its extra virgin oil is cold pressed, and often of the first press. Supermarket olive oil generally is considered terrible quality compared to much more expensive fully biological olive oil.
- Both extra virgin olive oil (high quality oil likely better) and virgin coconut oil are able to kill "bad" mouth bacteria, giving credence to long-term oil-pulling benefits claims (it seems best to mix both oils, with a potential extra synergistic effect on top of it):
  - 2020, vol. 8, issue 3, Journal of Research in Medical and Dental Science (India), 'Antibacterial and Antibiofilm Effects of Virgin Coconut and Virgin Olive Oils on Streptococcus sobrinus and Lactobacillus case' (**PDF**): *"In conclusion, the antibacterial effect of VCO [Virgin Coconut Oil] and VOO [Extra Virgin Olive Oil] is as effective as 0.12% CHX. Both oils show potential as alternative mouthwashes in dental caries prevention. The effectiveness of VOO [Extra Virgin Olive Oil] is at the initiation stage of plaque formation. However, once plaque has formed, the use of VCO [Virgin Coconut Oil] based mouthwash is advisable due to its superior antibiofilm activity."*
- Olive oil is able to eradicate H. pylori, but only high quality oil:
  - Sep. 2014, Integrative Medicine Research, 'Current knowledge on alleviating Helicobacter pylori infections through the use of some commonly known natural products: bench to bedside': *"Romero et al3 examined the effect of olive oil on eight different H. pylori clinical isolates, including three antibiotic-resistant strains, and observed the potent anti-H. pylori activity of olive*

oil against all the tested strains. ... Contrary to the findings of Romero et al,3 Preuss et al4 reported that olive oil does not exert antibacterial effect against H. pylori; this conflicting finding could be attributable to the difference in the use of olive oil...

Based on the results of previous studies, Castro et al5 performed two different pilot clinical studies comprising 30 participants, identified as H. pylori-positive, per trial. In the first trial, all 30 individuals received 30 g of olive oil at two different time intervals—initially, washed virgin olive oil was administered for 14 days and then, after a 1-month gap, unwashed virgin olive oil was administered for 14 days. The researchers found that H. pylori infection was eliminated in eight of the 30 (27%) individuals after 4–6 weeks from the first clinical intervention, and at the end of the study, 12 of the 30 individuals did not show H. pylori infection. This result indicates that olive oil had cleared the H. pylori infection in 40% of the cases on completion of the treatment protocol. In the second clinical intervention, 30 g of different virgin olive oils was administered for 14 days to 30 H. pylori-positive individuals. Only three of the 30 (10%) individuals were H. pylori-negative after 4–6 weeks, and five of the 30 individuals (11%) were negative in 24–72 hours after administration of the last oil dose."

- Olive oil as anti-fungal properties, and can be combined with a turmeric extract to reach a 100% inhibition rate with yellow and black molds:
  - June 20, 2023, Journal of Applied and Natural Sciences, 'Antifungal synergic activity of essential olive oil and alcoholic turmeric extracts against isolates from the dried grapes raisins': *"Alcoholic extract of turmeric showed a significant inhibitory effect on the colony diameter of both [Aspergillus] A. flavus [yellow fungus] and A. niger [black fungus] isolated from the fruit of Iraqi black raisins with an inhibition rate of 86.6% and 68.8 %, respectively, at 4 mg/ ml concentration. The mixture of turmeric and essential olive oil gave a distinct inhibitory effect, reaching a 100% inhibition rate from the lowest to highest concentration for both A. niger and A. flavus."*

Olive oil: ozoned

- Ozonated oil exists for olive oil, coconut oil, and sunflower oil. It means that during production the oils have been infused with ozone gas, a highly reactive, unstable gas composed of three oxygen atoms (hence O3 or trioxygen instead of O2 or oxygen).

- Apart from any natural anti-microbial properties, the added oxygen that is released during application of the oil more effectively kills anaerobic bacteria, fungi, and yeasts; supports new cell growth; and stimulates the body's immune response by releasing growth factors to accelerate tissue repair and reduce inflammation. This is why ozonated oils are more potent anti-microbials than regular oils.
- Looking at various studies, it appears ozonated oil strongly inhibits various bacteria and candida. It has more trouble inhibiting aspergillus fungi, and seems to have particular trouble killing the very resistent spores of aspergillus fungi.
- Studies:
  - 2006, no.5, International Journal Of Agriculture & Biology, 'Antifungal Activity of Ozonized Olive Oil (Oleozone)' (Egyptian study): *"The effect of ozonized olive oil (Oleozone) on some pathogenic fungi (Aspergillus fumigatus, Candida albicans, Epidermophyton floccosum, Microsporum canis & Trichophyton rubrum), were tested. ... Candida albicans, Microsporum canis and Trichophyton rubrum were more susceptible to oleozone than other species tested."*
  - Dec. 16, 2022, International Wound Channel, 'Ozone therapy for skin diseases: Cellular and molecular mechanisms' (Chinese study): *"When stored at 4°C, ozonated oil can maintain stable properties and pharmacological activities for 2 years.[25, 30] Therefore, ozonated oil is considered an excellent supplement to unstable ozonated water. ... Ozone oil exhibits a good affinity for the skin and can afford an emollient effect. ... Repeated topical application of ozonated oil may result in excessive ozone concentrations in the skin lesion, occasionally inducing irritant pain. Ozonated oil can promote wound healing [17] and topically treat atopic dermatitis, [11] psoriasis, [9] superficial bacterial infections, [31] and fungal infections. [32] ...*
    Ozone is frequently used as a complementary therapy for various cutaneous diseases, including infectious skin diseases, wound healing, eczema, dermatitis, psoriasis, axillary osmidrosis, diabetic foot, and pressure ulcers. In addition, several studies have reported the superior potential of ozone therapy for improving skin and gut microbiomes, as well as antitumour and antiaging treatment."
  - 2021, issue 6, The Journal of the International Ozone Association, 'Various Antimicrobial Agent of Ozonized Olive Oil' (Arab study): *"The aim of this study is the determination of antimicrobial activity at different concentrations of ozonized olive oil of Olea europea L. against eight bacteria... two yeasts ... and five fungi [as] Aspergillus niger [and] Fusarium solani. ... The oil inhibits the growth of most strains... The ozonized oil*

inhibits the growth of all tested fungal strains, the most sensitive fungi is Fusarium solani... [The study] indicates that antifungal activity on C. albicans of ozonized oil is very significant."

Omega 3

- Three versions of omega 3 oil exist, with EPA and DHA mostly found in fish and ALA mainly in plants and seeds:
  - **EPA:** Among its functions are serotonin migitation. Relieves depressive symptoms by limiting damage of toxins by gut cytotoxins. 2 grams per day is considered the minimum optimal by Dr. Rhonda Patrick.
  - **DHA:** Half life on 6-12 months. Great for cell membrane in the brains.
  - **ALA:** Plant-based, with flax seed (buy crushed) containing a whopping 23 grams per 100g and chia seed 17.5 grams per 100g. Sunflower, sesame, hemp, cumin seeds, hazelnuts and peanuts all contain next to nothing. EPA and DHA are very low in plant-based sources. ALA is often considered useless, although it still has some of the basic omega 3 benefits and is converted to EPA and DHA in the human body by the liver, albeit in small amounts. ALA to EPA conversion in men: 8% (1.8 gram per 100 gram flax seed). ALA to DHA conversion in men: 4% (0.9 gram per 100 gram flax seed). So 100g flax seed should provide 2.7 grams of EPA and DHA combined, a considerable amount. Even 1.35 grams at 50 grams is decent, especially when added to by other foods.
- In a wide range of scientific studies, Omega 3 (mainly in DHA and EPA form, but at least partially also in ALA form) has been tied to a wide range of health benefits: lowering blood pressure, reducing triglycerides, reducing risk of heart disease and stroke, reducing joint inflammation in rheumatoid arthritis patients, nourishing brain and eyes functions; optimal fetal development, helping to prevent and alleviate dementia, depression, asthma, migraine, and diabetes:
  - Jan. 2012, Advances in Nutrition, 'Omega-3 Fatty Acids EPA and DHA: Health Benefits Throughout Life': *"Studies have shown that EPA and DHA are important for proper fetal development, including neuronal, retinal, and immune function. EPA and DHA may affect many aspects of cardiovascular function including inflammation, peripheral artery disease, major coronary events, and anticoagulation. EPA and DHA have been linked to promising results in prevention, weight management,*

and cognitive function in those with very mild Alzheimer's disease."

- Dec. 2019, PharmaNutrition, 'Omega 3-metabolism, absorption, bioavailability and health benefits–A review': *"It is positively correlated that consumption of EFA and prevention of heart disease, hypertension, inflammation, cancer prevention, neurological disorders etc. α-Linolenic acid (ALA) also known as omega-3 is an EFA found in plant foods. On consumption, ALA serves as substrate for the synthesis of EPA and DHA, which play a central role in the proper functioning of the nervous system like anti-atherogenic properties and favourable in lowering BP and heart rate and improving the functioning of the cardiovascular system. Protective cardiac effect of EFAs are related to BP, arterial compliance, improved lipid metabolism and anti-inflammatory properties."*
- Oct. 2, 2022, Advanced Nutrition journal, 'Impact of α-Linolenic Acid, the Vegetable ω-3 Fatty Acid, on Cardiovascular Disease and Cognition ': *"Meta-analyses of observational studies have shown that increasing dietary ALA is associated with a 10% lower risk of total cardiovascular disease and a 20% reduced risk of fatal coronary heart disease. Three randomized controlled trials ... have shown that dietary ALA reduced total cholesterol, LDL cholesterol, triglycerides, and blood pressure, and epidemiologic studies and some trials also have shown an anti-inflammatory effect of ALA... The role of ALA in cognition is in the early stages but shows promising evidence of counteracting cognitive impairment."*

- Increased omega 3 (EPA and DHA)-filled fish oil ingestion leads to increased semen production, bigger loads being busted, bigger testicles, and higher (free) testosterone levels:
  - Jan. 17, 2020, Jama Network, 'Associations of Fish Oil Supplement Use With Testicular Function in Young Men': *"Findings: In this cross-sectional study including 1679 young men in Denmark, fish oil supplements were associated in a dose-response manner with higher semen volume and total sperm count, larger testicular size, a higher calculated free testosterone to luteinizing hormone ratio, and lower follicle-stimulating hormone and luteinizing hormone levels after adjusting for confounders. ...*
    Results: Among 1679 young Danish men (median [interquartile range] age, 18.9 [18.7-19.4] years) recruited to participate, 98 men (5.8%) reported use of fish oil supplements during the past 3 months, of whom 53 (54.1%) reported intake on 60 or more days. After adjustment and compared with men with no supplement intake, men with fish oil supplement intake on

fewer than 60 days had semen volume that was 0.38 (95% CI, −0.03 to 0.80) mL higher, and men with fish oil supplement intake on 60 or more days had semen volume that was 0.64 (95% CI, 0.15 to 1.12) mL higher (P for trend<.001). Similarly, testicular size in men with supplement intake on fewer than 60 days was 0.8 (95% CI, −0.2 to 1.9) mL larger and in men with fish oil supplement intake on 60 or more days was 1.5 (95% CI, 0.2 to 2.8) mL larger compared with men with no supplement intake (P for trend=.007). After adjustment, men with fish oil supplement intake had a 20% (95% CI, 9%-31%) lower follicle-stimulating hormone level and 16% (95% CI, 8%-24%) lower luteinizing hormone level compared with men with no supplement intake. There were no associations of intake of other supplements with measures of testicular function. ... In addition, men who used fish oil supplements had a 20% (95% CI, 9%-31%) lower FSH [follicle-stimulating hormone] level, 16% (95% CI, 8%-24%) lower LH [luteinizing hormone] level, and 8% (95% CI, 0%-17%) higher free testosterone to LH [luteinizing hormone] ratio compared with men with no supplement intake (Table 3)."

- Recommended daily amount: 1.1 gram for adult women, 1.6 gram for adult men. This can be rather hard to obtain, unless someone eats quite a bit of fish (with all its long term heavy metal dangers) or adds something like 50+ grams of flax or chia seeds a day to their meals. Chia affects taste less, but is more expensive, so adding 2 grams of omega 3 per day, and doing it cheap, really isn't all that easy.
  - Jan. 19, 2023, Frontiers in Nutrition, 'The influence of dietary and supplemental omega-3 fatty acids on the omega-3 index: A scoping review': *"The majority of the population do not consume adequate omega-3 fatty acids (n-3 FA), leading to global deficiencies, as evidenced by poor omega-3 status. An indicator of overall n-3 FA status, omega3-index (O3i) ≥8% has been associated with reduced risk of chronic disease, most notably cardiovascular disease. ...*

    Due to inadequate synthesis of EPA and DHA from ALA, many professional organizations have established recommendations for fish consumption. ...

    Generally, the lowest doses shown to be effective in raising O3i to recommended levels were >1,000 mg/d of combination DHA plus EPA for 12 weeks or longer. Supplements composed of triglycerides were more bioavailable and thus more effective than other formulas. Based on the data evaluated, practical recommendations to improve O3i to ≥8% are consumption of 1,000–1,500 mg/d EPA plus DHA as triglycerides for at least 12 weeks."

- Fish oil capsules, while not cheap, are a popular supplement. One pill usually gives one between 300 and 800mg of combined EPA and DHA omega 3. The problem is that a 2023 test of 72 fish oil supplements showed that at least 45% contained rancid (spoiled) oil, in particular those with flavorings in them. This has been a reported problem for more than a decade before that test. It could also be why at least 1 study failed to find any health benefits to taking fish oil supplements.
  - Sep. 15, 2023, George Washington University (mediarelations.gwu.edu), 'Tests Find Many Popular Omega 3 Supplements Are Rancid; GW researchers find 45% of fish oil supplements may not be fresh enough to deliver the health benefits consumers are seeking': *"The researchers found a total of 45% of flavored and unflavored supplements tested positive for rancidity, with 32% of flavored supplements testing positive and 13% of unflavored pills. However, added flavoring can mask the rancidity of supplements. ...*

    "Flavoring is potentially masking the freshness of omega-3 supplements in two ways," Jacob Hands, lead author of the study and medical student at GW School of Medicine and Health Sciences. If fish oil supplements are fresh, they won't have a fishy taste or smell, he explains. "Flavoring can mask those aspects but also makes it difficult for researchers to determine the level of oxidation and the quality of the supplement.""
  - Oct. 2, 2023, New York Post, 'Why fish oil supplements are basically worthless: study': *"Studies have shown that the omega-3 fatty acids found in fish such as salmon and mackerel provide health benefits, but the same has not been true for omega-3 fatty acids that come from supplement capsules.*

    - In a 2018 study of more than 15,000 people with diabetes, the risk of a serious cardiovascular event was no different between people taking an omega-3 supplement and people who were not.

    - A 2019 study with more than 25,000 participants found that fish oil supplements did nothing to reduce the risk of a major cardiovascular event (such as a heart attack or stroke) or getting cancer."
  - Nov. 10, 2018, New York Times, 'Vitamin D and Fish Oils Are Ineffective for Preventing Cancer and Heart Disease; The largest study to test vitamin D and omega-3 pills...' (somehow, benefits did show up in a "secondary analysis): *"One group took 2,000 IUs (international units) of vitamin D3 and 1 gram of omega-3s every day. A second group was given vitamin D and a dummy pill in lieu of omega-3. A third group got omega-3s and a*

vitamin D placebo. And the final group received two placebos. ... Participants ... were followed for 5.3 years on average. ...

Studies have linked low levels of the vitamin to conditions as varied as diabetes, high blood pressure, cancer, heart disease and depression. Many primary care doctors now routinely test patients' vitamin D levels and declare them deficient, and supplement sales have skyrocketed in recent years. ... He said doctors had engaged in "magical thinking about vitamin D," ... The Institute of Medicine in 2011 concluded that most Americans get enough vitamin D and that deficiencies have been overstated. ...

[However:] Secondary analysis of the data found, for example, a reduction in cancer deaths for people who took vitamin D for at least two years, and fewer heart attacks in people who took fish oil. ...

Dr. JoAnn E. Manson, an investigator at Brigham and Women's Hospital who led the trial, said that since fish oil did not reduce strokes, it did not have an impact on the overall risk of cardiovascular disease, a measure that combined heart attacks, strokes and cardiovascular deaths. But she said another analysis looking separately at heart attack found a 28 percent reduction among those taking fish oil, with a 40 percent reduction in people who eat little fish and a 77 percent reduction in African-Americans. She said the 28 percent reduction [already] was "pretty amazing. That's what you see with statins.""

Omega 7

- "Non-essential" fatty acid considered particularly useful to fight inflammation, reduce acne, improve skin, hair, and nails; combat dry eyes, and improve gut health and cardiovascular health. Most of this still needs to be proved.
- A lot of women use it as a moisterizer through sea buckthorn oil.
- Buckthorn oil apparently also is used in parts of eastern Europe and Russia as a folk medicine for digestive issues, and for its antimicrobial properties.
- Food sources:
  - Sea buckthorn oil: 50% of the oil consists of omega 7. The oil is extracted from the berries (seaberries), leaves, and seeds of the sea buckthorn plant (Hippophae rhamnoides), which grows all throughout the colder climates of Eurasia, and has more recently been exported to North Anmerica. Dried seaberries contain about 3-4 grams of omega 7 per 100 grams, plus around

400-800 mg (500-1000% of RDA) of vitamin C, and a decent amount of other vitamins.
    - Fish oil, various nuts as Macademia, and even olive oil contain small amounts of omega 7: about 1/10th of seaberries, and maybe about 1/500th of sea buckthorn oil.
- With regard to skin care, sea buckthorn oil doesn't work for everyone, or isn't particularly special compared to other oils. But for others, it makes all the difference. Experiences with regard to the latter:
    - **Reddit comment:** *"Why is Seabuckthorn oil SO underrated? It cleared my Comedones/stubborn little bumps so fast! Pure seabuckthorn oil worked just as well as curology, acne medication, etc. without the harsh effects. ... My breakout, that I've had on and off for YEARS cleared within days. I highly recommend it if all moisturizers break you out and if you are clogged pore prone. I believe the comedogenic rating is 0! All other oils break me out, even squalane."*

Oregano oil

- Helps to greatly inhibit or kill the following antibiotic-resistant bacterial strains:
    - Acinetobacter baumannii.
    - Pseudomonas aeruginosa.
    - Staphylococcus aureus (MRSA). [71]
- Oregano oil also is considered for agriculture:
    - Feb. 4, 2025, Agriculture jounral, 'Antifungal Efficacy of Essential Oils and Their Predominant Components Against Olive Fungal Pathogens': *"The results show that Chinese cinnamon and oregano EOs, along with their components, completely inhibited the growth of all tested fungi, indicating their potential as biological control agents in sustainable agriculture. ... Antifungal efficacy was tested on six species from the Botryosphaeriaceae family..."*
- Oregano oil, similar to Cranberry juice and certainly a respective 25%/75% mix of the two, can inhibit Helicobacter Pylori. Pure Cranberry juice is almost as effective against Helicobacter Pylori as the 25%/75% mix though, with pure Oregano oil slightly lagging behind. [72]
- The reader might want to look for alternatives first, because quite a few people are reporting online that using a lot of oregano oil in their self-treatments damaged their intestines. It is quite an aggressive oil.

Rose geranium oil

- Users say it is very effective at repelling tics, and more effective than Deet. It doesn't seem to work all day though.

Tea tree oil

- Oil that comes from the tea tree (Melaleuca alternifolia), located in eastern Australia. It has anti-microbial and anti-fungus activity
- Users say it is effective at fungal infections ranging from Athlete's Foot to toenail fungus:
  - **Reddit comment:** *"I have definitely used tea tree oil on a fungal infection that wasn't responding to normal antifungal medication and it worked. I've also used it for acne. Dilute your tea tree oil before using though, as it can be rather harsh on the skin. Moisturizer would be a good option. I usually dilute mine with jojoba oil or in my witch hazel toner depending on whether I'm using it on my body or my face. (I think jojoba oil can be used on the face too, but I don't like the feeling of it on my face)"*
  - **Reddit comment:** *"I know it treats toenail fungus infection, but it takes a while. You have to be persistent with it and it's only for external use."*

Thyme oil

- Oil mianly derived from Thymus vulgaris, a culinary herb found in Eurasia and North Africa that can reduce sinusitis and has other known health effects that also go for the oil.
- Inhibits the growth of black fungus Aspergillus Niger (clove oil and even more lemongrass oil might be more potent here), but doesn't kill it:
  - April 5, 2020, Scientia Horticulturae (Science Direct), 'Antifungal effects of essential oils against Aspergillus niger in vitro and in vivo on pomegranate (Punica granatum) fruits': *"The in vitro results showed that the growth of A. niger was completely inhibited by the application of clove oil at [all] concentrations... The in vivo results indicated that treated fruits with thyme oil at a concentration of 800 μL. L−1 had the lowest weight loss in comparison to eucalyptus, galbanum, and clove oil. Furthermore, among essential oils, treated fruits with thyme essential oil (800 μL. L−1) had the highest firmness. The highest anthocyanin content was obtained with eucalyptus essential oil at 800 μL. L−1... The present study suggests that the*

use of essential oils especially thymus and clove may be a useful alternative to the use of synthetic fungicides."

- Oct. 2024, Volume 7, Issue 4, Glasilo Future, pp. 46–55, 'Antifungal activity of thyme, oregano and laurel essential oils against Aspergillus niger Tiegh': *"The vapor phase of all tested oils showed a significant ($p < 0.05$) fungistatic growth inhibition of pathogen A. niger, where thyme oil achieved the highest pathogen inhibition (99.8%), while laurel oil was less effective (36.3%). The obtained results suggest that the tested vapor phase (especially of thyme and oregano oils) could potentially be extremely useful fumigants to prevent and control the fruit rot in storage."*

- Can reduce symptoms of bronchitis:
  - August 2021, Biomedicine & Pharmacotherapy, 'Thyme oil alleviates Ova-induced bronchial asthma through modulating Th2 cytokines, IgE, TSLP and ROS' (Arab study): *"Thyme is a natural product which is consisted of multiple phenolic compounds of therapeutic significance for treatment of cough and bronchitis. This study evaluated the efficacy of thyme oil against ovalbumin (OVA)-induced BA in an experimental rabbit model. ... [Now] our findings indicate for the first time that thyme oil can ameliorate OVA-induced BA via its immunomodulatory, anti-inflammatory, antiapoptotic, and antioxidant effects on the lung tissues of rabbits."*

Texas cedarwood Oil

- Users say it is very effective at repelling ticks, mosquitos and green flies, and more effective than Deet. Apparently a few drops in a spray bottle is all that is needed.

Vaseline

- Petroleum-based oil, but for most people it's great for moisterizing the skin. Many people have used it on their face for decades without issue, or seemiongly aging their skin.
- Vaseline can be key in keeping health issues as psoriasis under control. Due to its petroleum base, the Malassezia yeast that plays a key role in dandruff / seborrheic dermatitis cannot metabolize it, in contrast to olive, coconut, sunflower, castor and most other oils. Jojoba "oil" is one of the few natural alternatives here.

Probiotics

Kefir

- Among the mosty perfect food sources of beneficial probiotic bacterial strains that are part of the human digestive tract. Natural, biological kefir has a few more bacterial strains than supermarket kefir and overall is more potent against pathogens, but it still is very beneficial:
  - 2020, no. 1, International Journal of Food Properties, pp. 375–386, 'Comparison of traditional and commercial kefir microorganism compositions and inhibitory effects on certain pathogens' (PDF): *"The inhibitory effect on some pathogens were examined. A diverse spectrum of bacterial generawere identified in kefir samples including: Lactobacillus (six species), Lactococcus (one species), Saccharomyces (one species) Streptococcus (one species), Bifidobacterium (two species). While traditional kefir had a greater inhibitory effect on Enterobacter cloacae and Escherichia coli [E. coli] pathogens than commercial kefir, commercial kefir had a greater inhibitory effect on Enterococcus faecalis pathogen than traditional kefir. In general, traditional kefir had most effectiveinhibitory effect on pathogens."*
- Yoghurt or commercial beverages as Yakult often are promoted for their probiotic health. However, these commercial products usually only contain two or three - maybe up to five - probiotic bacterial strains. Kefir tends to have 12 or more probiotic strains, and 4-5 times more total "colony forming units" (CFUs) than yoghurt. Apparently natural kefir can contain up to 61 different strains and yeasts. Among the more common probiotic strains:
  - **Lactobacillus acidophilus:** Also common in yoghurt. Likely the most widespread probiotic.
  - **Bifidobacterium bifidum:** Also common in yoghurt.
  - **Streptococcus thermophilus:** Also common in yoghurt.
  - **Lactobacillus delbrueckii subsp. bulgaricus:** Also common in yoghurt.
  - **Lactobacillus casei:** Also common in yoghurt.
  - **Lactobacillus rhamnosus:** Sometimes in yoghurt. Studies have shown it has a positive effect on lactose intolerance, immunity, allergies and inflammatory bowel disease.
  - **Lactobacillus helveticus:**
  - **Lactobacillus kefiranofaciens:**
  - **Lactococcus lactis:**
  - **Lactobacillus plantarum:**
  - **Lactobacillus reuteri:**

    - **Lactobacillus johnsonii:** Often only in traditional kefir, not so much in commercial kefir.
    - **Bifidobacterium longum:** Often only in traditional kefir, not so much in commercial kefir.
    - **Bifidobacterium animalis:** Often only in traditional kefir, not so much in commercial kefir.
    - **Saccharomyces spp:** Often only in traditional kefir, not so much in commercial kefir.
    - **Lactobacillus kefiri:** Unique to kefir. Helps inhibit the growth of harmful bacteria as Salmonella, Helicobacter pylori, and E. coli.
    - **Candida krusei / Issatchenkia orientalis / Pichia kudriavzevii:** A yeast tied to commercial kefir. [73] Alternately described as beneficial (in kefir) and a multidrug-resistent pathogen more deadly than its Candida albicans cousin.
- As for common kefir yeasts, studies have shown they can be very potent in preventing inflammation of the intestinal epithelium in ways that differ from probiotics as Lactobacillus. [74]
- Kefir is 99% lactose-free, compared to milk or yoghurt.
- Antibiotics always wreck these yeasts and probiotic bacterial strains, killing them indiscriminately and causing digestive and health issues for life in patients having ascribed them.
- There exists something called "colonial resistance", meaning that existing colonies of bacteria in the human digestive tract can reject incoming probiotic strains. With some people - and likely residing strain variations - this resistance is higher than with others, meaning that probiotics work better or quicker for some than others.
- People's experiences with cures:
    - **This author:** For over a decade I had a white tongue (candida) to the point brushing, even with baking soda, vinegar, or anything else barely helped. However, I didn't bother too much with it until just 5 Amoxicillin antibiotic pills resulted in a yellow tongue overnight, and also greatly upset digestion. Drinking kefir for the next few months initially resulted in a huge amount of acid reflux and belching. Over the weeks though this became less, and, quite unexpectedly, the tongue became a normal color: not yellow, and only very slightly white, to the point a bit of mild brushing resulted in a normal, pink tongue.
    - **YouTube comment:** *"Started with Kefir in July. Lost 5 pounds in a month . (218 down to about 213) Weigh myself near the beginning of each month. Added sauerkraut/kimchi a couple of months ago. Now 209. Oregano oil capsules a week ago 3X day. Started turmeric the other day, will add pepper corns today. I've*

noticed a decrease in candida film on my tongue and in my mouth when I wake up."

- **Reddit comment:** *"Milk kefir. I went from craving and drinking 1.5 l of diet coke per day to having zero cravings and just cold turkey stopping. It happened about a week after drinking milk kefir daily."* **Reply:** *"I wonder if it was a candida thing. That can cause sugar cravings I think"*
- **Reddit comment:** *"I have started drinking water Kefir from a friends batch. At first it wreaked havoc in my guts but now I can drink it all I want. I noticed a more stable digestion since then but other than that not much."*
- **Reddit comment:** *"Fixed my IBS."*
- **Reddit comment:** *"Milk kefir has changed my life. When every [time] I eat spicy food on next day my rectum burns like hell. Sometimes I see undigested food in my poop. Milk kefir completely cured that problem. Now I have more energy than before, no more frequent headaches. I apply kefir face pack daily and my skins looks beautiful. Also I'm underweight. After drinking kefir now im looking much better. It's been nearly 5 months since I started. Now im going to try sourdough starter to eat healthy food."*
- **Reddit comment:** *"I drink 500ml kefir instead of dinner (and a protein shake). Keeps my weight down. I can also tolerate lactose quite a bit better now. I'm lactose intolerant, but it's gotten much better from regular kefir consumption"*
- **Reddit comment:** *"It has helped so much with my IBD, I am currently weaning off my medication as I am confident I don't need it anymore thanks to Kefir."*
- **Reddit comment:** *"No sounds now in my intestine. Better digestions."*
- **Reddit comment:** *"I feel like I have gotten sick (colds, etc) much less frequently. I've been drinking kefir for the past several years."*
- **Reddit comment:** *"I have been doing goat milk kefir and I feel like it makes a huge difference for me. I am regular, I stay more healthy than my peers, and I don't have as much depression when I am doing it daily. I have kefir grains and make it myself to save money."*
- **Reddit comment:** *"I was suffering from leaky gut for 6 months after the birth of my first child. I couldn't have dairy, sugar, gluten, fruit. I would have violent attacks from these things. I had rashes up and down my arms and legs. I couldn't use any skin product without breaking out in rash. I couldn't even eat bananas, sweet potatoes, and zucchini. It was really horrible.*
  - I started eating paleo for 3 months. While it did improve my symptoms, they were still present.

- I started making home made kefir at home from raw milk bought fresh from my a neighbor who is a farmer. I was desperate for a cure to my diarrhea attacks.
- I started drinking it and had a horrible 11 day healing/detoxing reaction. I was bloated and jumping between diarrhea and constipation. It was hell. I almost quit 3 times, but I kept reading that this detox reaction I was having was good for me.
- I'm so happy that I kept going because on day 12 I woke up feeling amazing. I could suddenly eat those foods again. My rashes and itching vanished. I had crazy energy and was addicted to my kefir.
- I continued to drink it for 6 months, until the cow I was getting the milk from dried up. Her cow was grass fed as well so that may have made the difference. I tried to make it from store bought pasteurized milk and my stomach doesn't like it. I will wait for raw milk again to keep making it.
For now I make homemade kombucha. Love it."

Kimchi

- Korean side dish consisting of salted and fermented vegetables. It has a host of probiotics that differ, for example, from kefir.
- Apart from it being healthy for the digestive tract, uniquely good to restore proper microbial balance in the sinuses:
  - Rubbing organic or live culture (not pasteurized!) kimchi in the nose openings seems to provide the right bacteria to repopulate the sinuses and prevent the reemergence of bacterial, viral and fungal infections, including nasal polyps. The supplement Kimchi Power was developed from this realization by a person in a family who frequently underwent antibiotic treatment for sinus infections.
    - Jan. 12, 2015, LactoBacto.com, 'The One Probiotic That Treats Sinusitis': *"More than 5 years ago there were no probiotics containing L. sakei. None. So I experimented using a very easy kimchi sinusitis treatment (basically dabbing and smearing kimchi at certain stages of fermentation into my nostrils like a very messy eater) and found that it cured my chronic sinusitis of many years within two weeks. Obviously it contained L. sakei. Then the rest of my family also tried the kimchi treatment and were also quickly cured of chronic sinusitis! It felt miraculous, especially because it was so easy to do.*
      After 5 years we still feel great! Generally we only need to treat again with a product containing Lactobacillus sakei (we've been using refrigerated Lanto Sinus) after a virus which goes into sinusitis, or if for some other reason we

feel like we're sliding into sinusitis. We've improved every year so need to do it less and more minimally. ...

When a treatment works, then all sinusitis symptoms go away --sometimes within days, sometimes longer. This includes post nasal drip, sinus headaches, "clogged ears", bad breath, and sinusitis-related coughs. Even tonsil stones!"

- March 11, 2025 YouTube upload by Rob Ager (who for years suffered from debilitating nasal fungi and polyps), 'How I cured my chronic sinus infection and nasal polyps - without surgery, steroids or antibiotics', 15:00 and 19:00: *"In the past year, I had no sinus infection recurrence, [but] I still had some blockage going on in the right nostril. Not from congestion, not from infection, but just from polyps that were still there, and I didn't want to take the prednisone steroid again [due to side effects], and it wasn't interfering with my sleep, so it was okay, but I wanted to get rid of it. This [nattokinase] stuff shrunk them within 10 days, pretty amazing. ...*

  [Talks about nattokinase having removed his polyps. Then refers to having been inspired by the person behind LactoBacto.com to prevent polyps from coming back.] It's called Kimchi Power. This is expensive [and] once you [open and] store it, it doesn't last long. ... I only used it for three days and I got a fantastic result with it. Basically I would take a little cotton wad, dip it in the powder, and I would coat the inside of my nostrils with it, and then I would breath it in, so that it went up in the sinus microbiome. Three days and my sinuses felt fantastic. And it's ever since I did that that the fungal infections haven't come back, and nor have the bacterial infections. [From there] I've just been going and buying the kimchi and have been having that in my diet generally. [Apparently it] allows some of those good bacteria to fill your mouth and to make their way up the sinuses through the back of the mouth."

- Latilactobacillus sakei (formerly called Lactobacilles - with their being many strains of sakei), uniquely found in traditional kimchi, seems to be key in quickly repopulating sinuses that have been stripped clean of good bacteria due to antibiotics.
  - March 10, 2016, Science Translational Medicine, 'Sinus Microbiome Diversity Depletion and Corynebacterium tuberculostearicum Enrichment Mediates Rhinosinusitis': *"Using comparative microbiome profiling of a cohort of CRS patients and healthy subjects, we demonstrate that the sinus microbiota of CRS patients exhibits significantly*

reduced bacterial diversity compared with that of healthy controls. In our cohort of CRS patients, multiple, phylogenetically distinct lactic acid bacteria were depleted concomitant with an increase in the relative abundance of a single species, Corynebacterium tuberculostearicum. ... Lactobacillus sakei, which was identified from our comparative microbiome analyses as a potentially protective species, defended against C. tuberculostearicum sinus infection, even in the context of a depleted sinus bacterial community. These studies demonstrate that sinus mucosal health is highly dependent on the composition of the resident microbiome."

- The main source for Latilactobacillus sakei - apart from salami and sausage starter cultures - seems to be garlic. It naturally contains low levels of Latilactobacillus sakei, which increase dramatically during fermentation as part of kimchi. Because kefir and sauerkraut, and many more modern non-Korean kimchi variations do not contain garlic, it appears that this is the reason that Latilactobacillus Sakei is missing from these sources of probiotics.
  - Aug. 2005, International Journal of Food Microbiology, 'Bacterial community structure in kimchi, a Korean fermented vegetable food, as revealed by 16S rRNA gene analysis': *"Weissella koreensis was found in all the samples and predominated in three of them (42.6-82%). Leuconostoc gelidum, Leuconostoc gasicomitatum and Lactobacillus sakei were common in the remaining kimchi clone libraries (>34%)."*

Pickles

- Another probiotic. No research done yet.

Probiotic pills

- Probiotic supplements are popular. Pay attention to how many different strains are included though. They often include more strains than kefir or sauerkraut, possibly even combined.
- In contrast to drinking a liter of kefir a day, and in contrast to some people, this author never noticed any difference with taking pill supplements, even with the ones that were self-demonstrated to be "alive". This may have something to do with the fact that kefir

contains about 10 billion "colony forming units" (CFUs) per ml. 1 liter is 1,000 ml, so you're talking taking 10.000.000.000.000 (10 trillion) CFUs a day when drinking a liter of kefir daily. A pill supplement generally only contains 10-20 billion CFUs, so that might be the explanation that it is less effective. Another question also always is viability of the powdered bacterial colonies.

- To prove that supplement powder actually contains (a decent amount of) live bacteria, one can drop the powder in a small cup of milk (100 ml or so). Let it stand for a few days at room temperature, and see if it thickens. This often happens after about 2-3 days, likely right before the milk starts to spoil (the bacteria do inhibit this to an extent). If the milk never thickens, you know you've been sold dead probiotics.
- It might be an idea to thin commercial kefir with milk, or water, and drop the contents of the probiotic capsules in this. When you drink the kefir 2-3 days later (it stays good at least twice as long as milk), it should contain much more diverse bacterial colonies.

Sauerkraut

- Apart from a decent amount of vitamin C (25mg/100g, 33% of RDA), raw sauerkraut mainly is a potent probiotic containing a number of different bacterial strains than kefir, and also in different amounts. Strains can vary depending on the method of fermentation and the amount of time it is allowed to ferment, but usually the main ones are:
  - Leuconostoc mesenteroides.
  - Lactobacillus brevis.
  - Lactobacillus plantarum. [75]
- No additional research yet.

TEAS

Essiac Tea

- Tea claimed to fight cancer, improve immunity, increase detoxification, and decrease inflammation. Not researched yet.
- Testimonies:
  - **YouTube comment:** *"Essiac tea is reviving my cat who has cancer and ate less than a 1/4 tsp of food for a week. Within days of being given 9ml of essiac tea by syringe 3x a day he began to drink a little tuna juice and is now at 10 days eating a few tbsps of wet cat food. And has the energy to walk around!"*

Green Tea

- Green tea may or may not stain your teeth as bad a black tea or some other traditional teas, but it still does stain them over time. Solutions:
  - Whole leaf tea leaves appear to release less tannins than the powdered leaf in the typical tea bags.
  - Don't sip the tea for hours on end. Drink it relatively quickly.
  - Rinse your mouth with water after drinking a cup of tea.
  - Brush your teeth with baking soda on occasion.
  - Regular professional dental cleanings get the stain off.
  - Add a few tablespoons of milk to the tea. The casein in the milk attaches to the teeth-staining tannins, neutralizing them:
    - Aug. 17, 2015, Daily Mail, 'Why a splash of milk in your tea keeps teeth white: Protein found in dairy prevents staining - and is BETTER than whitening toothpaste': *"Casein, the main protein in milk, binds to the tannin and prevents staining [and bitterness]. ... 'The magnitude of the colour change observed in our experiments is comparable to the colour change seen by vital bleaching products and more effective than whitening toothpastes [used after the staining has taken place it appears].' ...*
      The news comes after a study found drinking tea reduces the risk of dying from causes unrelated to the heart by a quarter compared with those who don't drink tea."
    - Nov. 2014, International Journal of Dental Hygiene, 'Prevention of tea-induced extrinsic tooth stain': *"Milk significantly reduces the ability of tea to stain teeth (P = 0.0225), specifically in the L* and a* dimensions (P = 0.0182 and P = 0.0124, respectively) of the colour sphere. Casein ... is responsible..."*
- Green tea drank while the flu is going round, lowers the incidence of sickness and also apparently aides recovery time: [76]
  - Feb. 21, 2011, BMC Complementary and Alternative Medicine, 'Effects of Green Tea Catechins and Theanine on Preventing Influenza Infection among Healthcare Workers: A Randomized Controlled Trial': *"Eligible healthcare workers (n = 197) were enrolled and randomly assigned to an intervention; 98 were allocated to receive catechin/theanine capsules and 99 to placebo. The incidence of clinically defined influenza infection was significantly lower in the catechin/theanine group (4 participants; 4.1%) compared with the placebo group (13 participants; 13.1%) (adjusted OR, 0.25; 95% CI, 0.07 to 0.76, P = 0.022). The incidence of laboratory-confirmed influenza*

infection was also lower in the catechin/theanine group (1 participant; 1.0%) than in the placebo group (5 participants; 5.1%), but this difference was not significant (adjusted OR, 0.17; 95% CI, 0.01 to 1.10; P = 0.112). The time for which the patient was free from clinically defined influenza infection was significantly different between the two groups (adjusted HR, 0.27; 95% CI, 0.09 to 0.84; P = 0.023)."

- Nov. 2, 2020, European Journal of Clinical Nutrition, 'Green tea consumption and influenza infection among Japanese employees': *"We conducted a case-control study in a cohort of 4302 workers. ... Green tea consumption was significantly associated with decreased odds of developing influenza; the multivariable-adjusted odds ratio for green tea consumption of ≥5 cups/week was 0.61 (95% CI 0.39–0.95) compared with <1 cup/week (P for trend = 0.028). When analysis was restricted to cases confirmed using a diagnostic kit, the corresponding value was 0.68 (95% CI 0.39–1.18; P for trend = 0.16)."*

- Green tea can help detox the body of heavy metals as lead. [77]
- Green tea also has been attributed anti-cancer properties. This has not yet been researched by this author.
- Much of Green Tea's health benefits, including its anti-tumor properties, are ascribed to its main tannin, Epigallocatechin Gallate (EGCG), as well as its antioxidants.
- Green tea has been demonstrated to temporarily work against halitosis (bad breath), apparently for about 20-30 minutes:
  - Feb. 2008, Journal of Nutritional Science and Vitaminology, 'Effect of green tea on volatile sulfur compounds in mouth air': *"Halitosis is caused mainly by volatile sulfur compounds (VSCs) such as H(2)S and CH(3)SH produced in the oral cavity. Oral microorganisms degrade proteinaceous substrates to cysteine and methionine, which are then converted to VSCs. Most treatments for halitosis focus on controlling the number of microorganisms in the oral cavity. Since tea polyphenols have been shown to have antimicrobial and deodorant effects, we have investigated whether green tea powder reduces VSCs in mouth air, and compared its effectiveness with that of other foods which are claimed to control halitosis. Immediately after administering the products, green tea showed the largest reduction in concentration of both H(2)S and CH(3)SH gases, especially CH(3)SH which also demonstrated a better correlation with odor strength than H(2)S; however, no reduction was observed at 1, 2 and 3 h after administration. Chewing gum, mints and parsley-seed oil product did not reduce the concentration of VSCs in mouth air at any time. Toothpaste, mints and green tea strongly inhibited VSCs production in a saliva-putrefaction system, but chewing gum*

and parsley-seed oil product could not inhibit saliva putrefaction. Toothpaste and green tea also demonstrated strong deodorant activities in vitro, but no significant deodorant activity of mints, chewing gum or parsley-seed oil product were observed. We concluded that green tea was very effective in reducing oral malodor temporarily because of its disinfectant and deodorant activities, whereas other foods were not effective."

- Matcha likely is the best type of green tea you can drink, with on average about 2-3 the EGCGs:
  - A type of green tea that was grown in China, and was brought to Japan by Zen Buddhists. In contrast to regular green tea, it is grown in the shade rather than the sun, resulting in extra high concentraions of catechins, phenolic acids, quercetin, rutin, theanine and chlorophyll. Matcha has a much more intensely green color.
  - Apparently matcha stains the teeth less than regular green tea - even without adding milk - and also seems more effective at killing mouth bacteria.
  - Sep. 5, 2003, Journal of Chromatography A, 'Determination of catechins in matcha green tea by micellar electrokinetic chromatography': *"Using a mg catechin/g of dry leaf comparison, results indicate that the concentration of epigallocatechin gallate (EGCG) available from drinking matcha is 137 times greater than the amount of EGCG available from China Green Tips green tea, and at least three times higher than the largest literature value for other green teas."*
  - Dec. 12, 2019, matchaalternatives.com, 'Busting the Matcha Myth: Does matcha really have 137 times more antioxidants (EGCG) than green tea? (Antiox Part 4)': *"Consumers Lab reports EGCG in a typical cup of matcha contains 100/110 to 200/220 mg, whereas they found that a typical cup of green tea contains 40-80 mg (the range is from 1 to 2 teaspoons)."*

Rooibos Tea

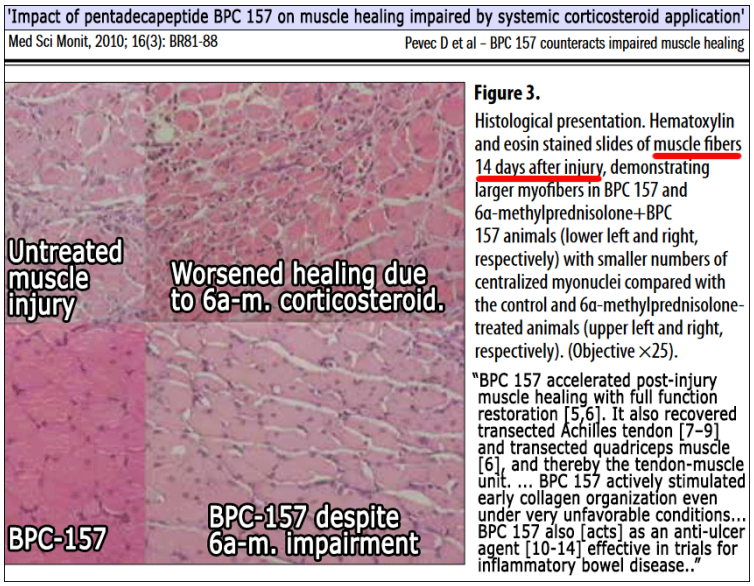
- The Latin name is Aspalathus linearis. Its South African name translates as "Red Bush". It only grows on the west coast of South Africa. Planting it in other parts of the country or world has failed due to its need for certain specific weather conditions.
- In contrast to traditional teas and especially black tea, Rooibos does not stain teeth, as it less acidic (higher pH) and contains almost no tannins.

- Contains many antioxidants, including aspalathin, luteolin and quercetin.
- Does not contain caffeine.
- Contains various polyphenols, including the extremely rare aspalathin and nothofagin. Rooibos actually is the only known plant source of aspalathin.
- Rooibos inhibits the influenza (flu) virus, at least in vitro, and has been suggested as being beneficial to COVID patients:
  - May 3, 2021, Tropical Journal of Natural Product Research, 'In Vitro Antiviral Activity of Rooibos Tea (Aspalathus linearis) Leaves Aqueous Extract against Influenza Virus' (Sudan-based study): *"The results reveal that the extract showed a significant broad spectrum of anti-influenza activityagainst both influenza A and B with 50% inhibitory concentration (IC50) of 1.3 mg/mL, whilethe 50% cytotoxic concentration (CC50) was 40 mg/mL. ... The virus-induced cytopathic effects were significantly reduced. Plaque assays indicated that the extract markedly reduced virus infectivity in a dose-dependent manner. Results of this study indicated that the extract directly affected virus particles and disrupts the function of virus adsorption to host cells."*
  - Nov. 2021, Journal of Functional Foods, 'Rooibos, a supportive role to play during the COVID-19 pandemic' (above study not linked): *"More pertinent to the current pandemic, Rooibos has displayed anti-hypertensive (through inhibition of ACE), anti-inflammatory, antioxidant, anti-diabetic, anti-viral, cardiometabolic - and organoprotective effects (Khan and Gilani, 2006, McKay and Blumberg, 2007, Yang et al., 2018, Nakano et al., 1997). ... Although the direct evidence for a Rooibos application in COVID-19 is currently unclear, numerous animal models and increasing human studies have documented its efficacy and safety in several relevant chronic non-communicable diseases, such as CVD [cardiovascular disease] and diabetes, oxidative distress, and inflammation as a support for general health and well-being."*
- Rooibos polyphenols aspalathin and nothofagin have been credited with a stress-lowering effect, by lowering cortisol levels.
- Rooibos polyphenol aspalathin also reduces insulin sensitivity and in that manner can improve diabetes symptoms.
- Apparently six cups of Rooibos tea per day increases the body's main antioxidant, glutathione (see NAC), by 100%.
- Rooibos' antioxidants luteolin and quercetin are known to inhibited cancer growth in vitro. Rooibos tea extract also inhibits skin cancer in mice when applied topically. Another study showed Rooibos helps prevent cancer due to its anti-mutagenic effect.

- There are some worries that Rooibos is problematic to drink during chemotherapy, because it prevents certain drugs from working fully. On the other hand, at least one study has shown that Rooibos prevents damage to healthy cells during chemotherapy.
- It helps prevent cardiovascular disease (CVD) by lowering LDL and helps inhibiting the enzyme that causes CVD.
- Rooibos helps prevent fatty liver disease.
- Much research still needs to be done, both by this author here, and in general by scientists.
- Experiences:
  - **YouTube comment:** *"This tea more or less cured my irritable bowel syndrome, it is awesome in taste & effects."*

PEPTIDES

BPC-157


'Impact of pentadecapeptide BPC 157 on muscle healing impaired by systemic corticosteroid application'
Med Sci Monit, 2010; 16(3): BR81-88
Pevec D et al – BPC 157 counteracts impaired muscle healing
Untreated muscle injury
Worsened healing due to 6a-m. corticosteroid.
BPC-157
BPC-157 despite 6a-m. impairment
Figure 3.
Histological presentation. Hematoxylin and eosin stained slides of muscle fibers 14 days after injury, demonstrating larger myofibers in BPC 157 and 6α-methylprednisolone+BPC 157 animals (lower left and right, respectively) with smaller numbers of centralized myonuclei compared with the control and 6α-methylprednisolone-treated animals (upper left and right, respectively). (Objective ×25).
"BPC 157 accelerated post-injury muscle healing with full function restoration [5,6]. It also recovered transected Achilles tendon [7–9] and transected quadriceps muscle [6], and thereby the tendon-muscle unit. ... BPC 157 actively stimulated early collagen organization even under very unfavorable conditions... BPC 157 also [acts] as an anti-ulcer agent [10-14] effective in trials for inflammatory bowel disease.."

- A peptide that can be found in human gastric juice in very small amounts. Together with TB-500 it is known as the "wolverine stack" and very popular among athletes, bodybuilders, and arm wrestlers.
- It is among the only peptides in the sports and bodybuilding world that can be taken uninterrupted for long periods of time without resulting in many side effects.
- Side effects, such a insomnia, headaches, fatigue, hot flashes, localized skin rash, or swellings after injections, do exist, but they tend to be relatively minor and resolve quickly upon stopping the injections. Some of the side effects could also be part of a healing process.
- BPC-157 is used a lot in the sports world for healing tendons in particular, which do not have a lot of blood circulation and therefore

can be considerably harder to heal than muscles.

- BPC-157 also heals muscles, bones and open wounds, in the latter case often leaving no scar at all.
- More than a few users, especially those having taken oral pill forms, have commented how BPC-157 drastically improved any gastrointestinal issues they had. This has also been confirnmed by studies.
  - May 1994, Life Science, 'The beneficial effect of BPC 157, a 15 amino acid peptide BPC fragment, on gastric and duodenal lesions induced by restraint stress, cysteamine and 96% ethanol in rats.'.
  - Aug. 27, 2007, Surgery Today, 'Stable gastric pentadecapeptide BPC 157 in trials for inflammatory bowel disease (PL-10, PLD-116, PL14736, Pliva, Croatia) heals ileoileal anastomosis in the rat': *"BPC 157 (BPC 157), which has been shown to be safe in clinical trials for inflammatory bowel disease (PL-10, PLD-116, PL14736, Pliva, Croatia), may be able to cure intestinal anastomosis dehiscence. This antiulcer peptide shows no toxicity, is limit test negative, and a lethal dose is not achieved. It is stable in human gastric juice. In comparison with other standard treatments it is more effective for ulcers and various wounds... Throughout the experiment, both higher doses of BPC 157 were shown to improve all parameters of anastomotic wound healing."*
  - Oct. 18, 2021 YouTube upload by 'Stipe Kapovic', 'BPC157 2 week results. The good and the bad': *"I have recently been taken [injectable] BPC-157, in conjunction with TB-500, Ipamorelin, and CJC [1295]. ... I've been someone who has been riddled with IBS issues ever since I was 15-16. Probably too much information, but diarrhea, stomach aches, man I get them non-stop. I mean, non-stop. Every day. Every second day. Ever since taking BPC I have absolutely zero issues with my stomach. I mean zero. I've had no aches. I've had no digestive issues. ... That was pretty much unbelievable to me. It is something I absolutely not expected, but it happened. ... Have [the injuries] gotten better. Yes. [Quite a bit.]"* Dec. 1, 2021 update: *"I've ran out of BPC quite a while ago. ... For me it didn't really fix anything. Just flat out honest. It helped my stomach a bit. I've had IBS for quite a while. I believe my diet also was a lot better. I'd say my stomach is a litrtle bit better than it was before BPC and TB and all that. But is it perfect? No."*
- Half-life of BPC-157 is just 30 minutes, compared to the 2-2.5 days for TB-500, a peptide that often is taken in conjunction with BPC-157. Therefore, the idea is that BPC-157 best is injected once or twice a day, while TB-500 generally is injected twice a week. That migth be true, but the fact is that personal experience makes it clear that a

single dose of 750mcg of BPC-157 reaches peak intensity in local healing after 4.5 hours, continues at high intensity for at least 9 hours, and still is active 14 hours after. Hence, this author has to agree with one study that speculated that BPC-157 likely initiates a *"chain of secondary events"* that continues its effect beyond the half-life detected in the blood. It appears that all BPC-157 peptides migrate to wherever they are needed in the body in the first 2 hours, stay there, and initiate the processes for healing, without them being detected in the blood anymore.

- Dec. 14, 2022, Frontiers in Pharmacology, 'Pharmacokinetics, distribution, metabolism, and excretion of body-protective compound 157, a potential drug for treating various wounds, in rats and dogs': *"After a single intravenous (IV) administration, single intramuscular (IM) administrations at three doses in successive increments along with repeated IM administrations, the elimination half-life (t1/2) of prototype BPC157 was less than 30 min. ... BPC157 reached its peak rapidly in rats... The prototype drug could not be detected 4 h after administration, and its elimination half-life was less than 30 min."*
- March 1, 2010, Medical Science Monitor, 'Impact of pentadecapeptide BPC 157 on muscle healing impaired by systemic corticosteroid application' (2008 study): *"Considering that peptides generally have a short half-life but prolonged effects (BPC 157 is no exception; for review see, e.g. [17,24]), it may be that also BPC 157 can successfully trigger a particular chain of secondary events increasing its beneficial effect."*
- **This author:** The experience is described in additional detail below, but looking at my notes, my first (large 750mcg) BPC-157 injection, in my left quad, was on April 11, 2024, 11:30 p.m. - 30 minutes before a TB-500 injection in my lower stomach (the following experience repeated later too without the TB-500). Next I did a minor 7 minute jog. Then, per my log:
  *"**Around 2 A.M.** I fall sleep. Right before falling asleep I feel a strange, intense buzzing sensation in the left-back heel, which is damaged from years back. ...*
  ***4:12 A.M.:** I wake up to an overall buzz, in trance. [Let's skip a lot] I just feel warm and cocoony-like. The back heels [sites that never healed properly] are all warm and throbby. Spasm of my back muscle [which never properly healed too], like it's healing. Or trying to heal.*
  ***8:14 A.M.:** I had an intense [...] dream. I just woke up. I'm having my feet on top of each other. They seem to be warmer than usual in the damaged areas. I feels cushiony. ...*
  ***1:04 P.M.:** Last wake up. Again my heels, towards the soles, feel warm and relaxed. It's a very pleasant sensation."*

- Quite a few people swear it has a strong local effect, and therefore is best to subcutaneously inject near the site of injury. Fact is, despite possibly having an enhanced local effect, BPC-157 strongly works systemically as well. Experiences on this issue:
  - **This author:** Before going to bed, I injected a large dose of BPC-157 into my left-lower quad, as my lower quads were peculiarly injured: no pain during deadlifting, but clearly heavily damaged afterwards due to repeatedly lifting far too much weight. Two-and-a-half hours later, upon falling asleep, I have some warm buzzing in left back heel. 4.5 hours after the BPC-157 injection, I wake up in heavy trance (a side effect of many common supplements and medicines that is likely quite unique to me) with a very powerful sensation of warm "rings" or "cushions" around both of my heels. My heels actually involve a much older injury that never properly healed. I didn't feel anything in my quad tendons. This happened multiple times, and just based on that, it is clear that BPC-157 works very strongly systematically and appears to go where it feels it is needed the most.

    The sensations around my heels, by the way, were the exact same when only injecting BPC-157, in the absence of TB-500. So I attribute them to BPC-157.
- Studies confirm BPC-157 powerfully heals muscles, tendons, bones, and wounds:
  - July 2021, Alternative Therapies In Health And Medicine, 'Intra-Articular Injection of BPC 157 for Multiple Types of Knee Pain': *"Results: Of the 16 patients, 12 had received only BPC 157 as an intra-articular injection. In this group, 11 of the 12 patients (91.6%) had significant improvement in knee pain [of all causes], whereas 1 patient (8.3 %) had no improvement. The other 4 patients received a combination of 2 peptide injections of BPC 157 and TB4. Of the patients who received both peptides, 75% showed significant improvement, but 25% had no relief of their knee pain. Overall, 14 of 16 patients (87.5%) had relief of their knee pain when BPC 157 or a combination of BPC 157 and TB4 was used."*
  - March 1, 2010, Medical Science Monitor, 'Impact of pentadecapeptide BPC 157 on muscle healing impaired by systemic corticosteroid application' (2008 study): *"We recently demonstrated that the pentadecapeptide BPC 157 accelerated post-injury muscle healing with full function restoration [5,6]. It also recovered transected Achilles tendon [7–9] and transected quadriceps muscle [6], and thereby the tendon-muscle unit. Importantly, it counter-acted negative aspects of corticosteroids [7,8,10] and corticosteroid impairment in tendon to bone [7,8] and thermal injury [10,11] healing. BPC 157*

also seems to be of high physiological importance [12] as an anti-ulcer agent [10-14] effective in trials for inflammatory bowel disease (code name PL 14736, Pliva, Croatia), without toxicity reported so far [15–17]. Unlike standard peptides, it does not need a carrier and is resistant to highly degrading media [5–23]. BPC 157 actively stimulated early collagen organization even under very unfavorable conditions [5-11]...

The pentadecapeptide BPC 157, given without a carrier, improved the healing of transected quadriceps muscle. It also improved muscle healing in rats with muscle crush injury when applied systemically or locally. Importantly, it counteracted corticosteroid-impairment in tendon to bone healing. ....

After the gastrocnemius [i.e. calf] muscle complex had been injured, rats received BPC 157 (intraperitoneally or locally as a cream) and/or [the corticosteroid] 6a-methylprednisolone (intraperitoneally [i.e. stomach]) only once (immediately after injury, sacrifice [i.e., rat killed] at 2 h) or once daily (final dose 24 hours before sacrifice and/or assessment procedure at days 1, 2, 4, 7, and 14). Muscle healing was evaluated functionally, macroscopically, and histologically.

Results: Without therapy, crushed gastrocnemius muscle complex controls showed limited improvement. [The corticosteroid] 6a-methylprednisolone markedly aggravated healing [i.e., made the situation worse]. In contrast, BPC 157 induced faster muscle healing and full function restoration and improved muscle healing despite systemic corticosteroid treatment when given intraperitoneally or locally and demonstrated functionally, macroscopically,and histologically at all investigated intervals.

Conclusions: BPC 157 completely reversed systemic corticosteroid-impaired muscle healing."

- This author advises that before using BPC-157 or TB-500 to also make sure to get the blood flowing once a day. Many people may already get that from their work, or a daily bicycle commuter ride, but I wasn't at the time of injury. And incorporating that made all the difference. My experience:
  - **Author experience:** For the time being I seem to be among a minority that didn't notice the slightest improvement injecting BPC-157 and TB-500 for close to a week. All of my lower quad tendons were ruined due to a few weeks of extra heavy negative deadlifting, apparently because whatever damage was done during lifting was not repaired in between. Going easy for over a month, and on physiothrapist advice, doing a bunch of slow 10-30kg leg extensions, only resulted in more problems: slowly but surely pain spread from (already

overworked) tendons to muscles.

This is why I got over my fear of injecting myself and tried BPC-157 and TB-500. Despite heavy sensations during night wake ups, at least in my heels, where an older injury resided, I didn't notice the slightest improvements.

It wasn't until I decided to do a daily high-speed bicycle run that I started to improve rapidly: literally more per day than earlier in a month. Those blood flow from those bike runs also finally resulted in a similarly-recent shoulder tendon injury of mine starting to clear up rapidly.

- **Author experience:** I experienced the exact same thing with a bruised rib injury. Just sitting in front of the laptop all day, "taking rest", resulted in zero improvement beyond a certain point. Weight lifting sessions didn't do much either. However, each time I did a run just before going to bed, even when it was just 400m around the block, the next morning the rib injury had noticeably lessened. Funny though, to make sure the injury wouldn't come back in a nagging way once every few weeks, I had to do 240kg+ shrugs and (negative) deadlifts - which soon led to the quad injury. Between 190kg and 240kg the injury kept flaring up, but less each time. Above 240kg it was fully gone.

- Positive experiences with BPC-157 for tendon healing:
  - **Dr. Andrew Huberman:** *"I had an L5 compression and I was always like in pain standing up. Two injections of BPC-157, gone!"* **Late 2023 comment to it:** *"I tore L4-L5 a year ago that has not healed and is extremely painful. ... My UCLA doctor/orthopedic specialist has no idea what BPC is."*
  - **YouTube comment:** *"I can confirm myself that this [BPC-157] fixed a torn rotator cuff that was injured for over a year, I couldn't even do a single push up without severe Pain, 6 weeks on peptides and bam! Completely back to normal... This stuff is truly remarkable and you will never hear any doctor or physio recommend it to you because guess what? It works!"*
  - **Comment:** *"I had tennis elbow (i.e. torn tendon) for about 8 years. Tendons/ligaments don't at all heal like everything else as they don't have the blood supply. Subjectively, I went from pain/weakness being 9/10 to 5/10 over that 8 years. After just a few months of daily BPC-157 shots I went to 0/10 and have remained that way for 3 years now. I did directly inject into my upper forearm where the pain was (insulin syringe) but I'm not sure that was necessary as BPC is supposed to be systemic. Good luck!"*
  - **YouTube comment:** *"Dealing with tendonitis and 7 months of debilitating tennis elbow that PT did little to help and OTC pain killers were just partially numbing. 5 weeks of TB500 and*

BPC157 brought the pain from an 8 to a 2 and I have full ROM now. Needless to say, it is a damn miracle.

- **Comment:** *"I've had 20 years of knee injuries from basketball, tore my ACL in the left knee tore the meniscus in the right. I'm on day 6 bpc 157 with a oral supplement called cissus and have to say I feel 70% better already. No ligament locking no crackling in the joint, my improved range of motion."*
- **Comment:** *"Been using both BPC157 and TB500 at the same time. My elbows were horrible and have lower spine damage that's unrepairable. After 2 injections my elbows were normal and knees felt like new. My back always hurt as it wont create spinal fluid but I was able to dead lift for the first time in 5 years and pulled 305lbs easily. I truly works but since all is well I plan on stopping as it may be a waste or counter productive."*
- **Comment:** *"by the way BPC is not systemic....TB500 is. I use both when injured and is magic!!"*
- **YouTube comment:** *"I've suffered from chronic brachioradialis and bicep tendinitis for 15 years. I weight lift, wrestle and do Brazilian jiu jitsu. In the last 3 years my tendinitis has become so severe that after 15 minutes of wrestling, I can't even hold my cell phone. The pain is 10/10 unbearable. I've tried absolutely everything. I recently started taking BPC-157 maybe 20 days ago. I wrestled 4 times in the last week and for the first time in YEARS my tendinitis did not get inflamed. I'm absolutely mind blown. I now coach at my sons wrestling club and it was killing me that I wasn't able to wrestle anymore. I have been searching for a remedy for 15 years now. I can't explain how happy I am."*
- **YouTube comment:** *"I've had 20 years of knee injuries from basketball, tore my ACL in the left knee tore the meniscus in the right. I'm on day 6 bpc 157 with a oral supplement called cissus and have to say I feel 70% better already. No ligament locking, no crackling in the joint, my improved range of motion."*
- **YouTube comment:** *"BPC has taken my delayed onset muscle soreness from ultra marathon training from being sore for 4 days down to just 2 days of being sore, and the level of soreness has gone from a 7 out of 10 now to a 3 out of 10 during those 2 days, incredible!! And I also don't even get sore from strength training anymore which is almost unbelievable."*
- **YouTube comment:** *"I do 5 days of boxing with strentgh and conditioning and I am doing 2 hours each session. I healed some minor injuries with it but I need to emphasize that you won't see good results without doing some mobility exercises and stretches specific to your injury."*
- **YouTube comment:** *"I've had a sore knee since 2005 after high-siding a race bike. Was always mild pain for years after a run or*

heavy leg workouts like deadlifts and leg press. I got bpc and tb500 during the summer to treat tendinitis in my elbows. I couldn't bench 1 rep 40kg without severe pain. 3 months of peptides along with no upper body weights and collagen and elbows are like 95%, and back benching 100kg+. Also I took bpc first on its own as I only discovered tb500 while on bpc, so bpc 1 month, tb500 month 2 and 3, and my knees [are the] best it's been in near[ly] 20 years, and elbows are near 100%. I'm running both peptides along with collagen type 1 and 3."

- **YouTube comment:** *"Dislocated both knee caps and did some pretty severe damage to the surrounding areas, don't know what specifically, but my knee swelled to around 2x the size, black bruising all around the knees and hamstrings. Couldn't walk for 3 days, dependant on crutches for a further 4. Was given the all clear nothing was torn and it was just bad tissue damage, and strains and started BPC 157 3 days ago. 3 days of 250mcg 2x per day and I've already gained a huge amount of range of motion and have began walking off crutches, 5-10k steps per day with no pain. It's incredible."*
- **YouTube comment:** *"Had BPC 157 and TB500 for sports injuries and healed amazingly well."*
- **YouTube comment:** *"BPC-157 + TB 500 are the truth. You combine those with CJC 1295 + Ipamorelin, you will wind up healing up chronic pain and grow muscle, and lose fat. My lower back (left QL muscle) was killing me.. for years it was inflamed and causing me great discomfort, even just lying around in bed. 2 weeks on that peptide stack my pain was subsiding, after 6 weeks the pain was completely gone. Finally After 12 weeks i felt better then i have since i was in my early 20s, and I'll be 35 this year."*
- **YouTube comment:** *"Had severe tendinitis of both rotater cuffs and took bpc157 and haven't had any problems since finishing a 2 month program."*

- Apparent positive experiences with BPC-157 and cartilage:
  - **YouTube comment:** *"I had a torn meniscus last March. I was a month off of Sermorelin. Was trying to decide which next one to try... then I popped my knee... I've had near bone on bone force years. 24/7 pain. Different intensity at different times. But the torn meniscus was the deciding factor. My regular dr wanted me to get surgery. But I got BPC 157. And I'm completely healed. My doctor was stunned... he never seen anything like this.. I actually have more cartilage now.. way more.. I am in zero pain.. no crunching no feeling the need to favor it, or be careful.. it's like it never happened and my X-rays look like it never happened... "*

    - **Feb. 15, American Journal of Translational Research, 'Functional peptides for cartilage repair and regeneration':** *"Peptides able to mimic TGF-β activity have a promising role in cartilage tissue engineering due to their low costs, stability, long shelf-life, and ease of administration and controlled release."*
- Positive experiences with BPC-157 with other issues:
    - **YouTube comment:** *"I had a cut on my hand a while back, I'm a professional composer/musician and I was actually wondering how I was going to work without a left hand anymore for the piano. Used BPC157-TB500 and I'm not even kidding.. you can't even see where the scar would normally have been...healed in less than a week to the point where I could actually use the MFker. Stuff is crazy."*
    - **YouTube comment:** *"[You] convinced me to try BPC-157. I'm 65 and have no sprains or breaks but I do have lots of aches and pains. 18 days later and I have no more aches and pains which is cool but the best thing is, and I was not expecting this. My right kidney has been very tender for the past two years. So tender that I have to lay just right to get to sleep. My urine was dark (dark as in almost brown) not only in the morning but all day. Well, that's gone too. Not my kidney but the tenderness and the dark urine. I mean I have zero tenderness in my right kidney. My urine is now yellow in the morning and mostly clear during the day."*

TB-500

- A peptide that is produced in the thymus. It's good for the eyes, lungs, brain, nerve regeneration, and wound healing.
- TB-500 often is used in conjunction with BPC-157. There's some speculation whether it is actually needed when using BPC-157, because its effects tend to be more subtle. Sometimes when BPC-157 doesn't have enough effect by itself, adding TB-500 can result in noticeable results.
- Similar to BPC-157, TB-500 is strictly used for healing. It is not for muscle building.
- TB-500 has a much longer half-life than BPC-157 though. This is about half a week, versus 30 minutes for BPC-157. However, as discussed, the actual effects of BPC-157 seem to continues for at least 14 hours.
- TB-4 is a popular variant.
- Experiences with (apparently) pure TB-500 are hard to find:

- **YouTube comment (apparently pure TB-500, but not fully sure):** *"I work in construction and this stuff helped me recover a torn meniscus and other parts in my leg. I was almost vomitting in bed of the pain, and found this. After week 3 i doubled the dose and now i can walk, lift and jump. I was not walking normally for 6 months. I had a couple of mental breakdowns in the shower and in bed but now i can use my leg again. For everyone that wants to give it a try...it works very good. When im done after this session i do another one. If you don't want surgery you can try this."*

Ipamorelin

- Peptide that makes your body produce more growth hormone. It's a third generation Growth Hormone-Releasing Peptide (GHRP), after GHRP-6 (gen. 1; causes intense hunger) and GHRP-2 (gen. 2). It's the mildest of them all, with the least amount of side effects.
- The most common reported benefits reported are a considerably smoother skin, as well as increased tendon healing, and maybe a slightly lower fat percetage.

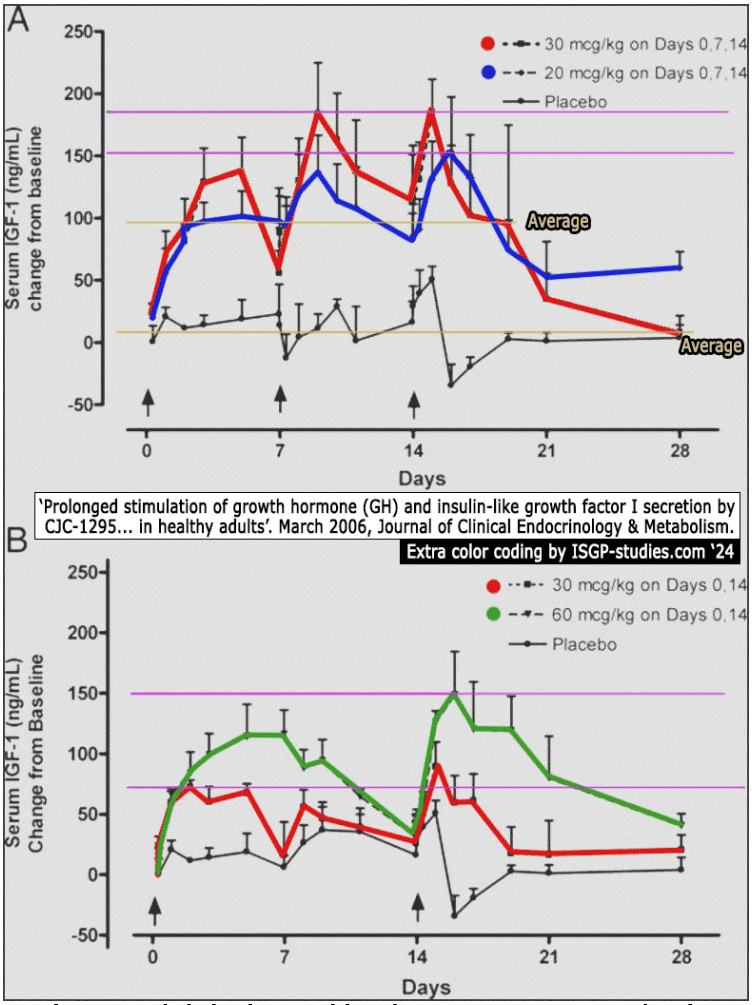
GRF Mod-1-29

- Also known as CJC-1295 non-DAC. It has a half-life of about 30 minutes, many times shorter than CJC-1295 DAC, although, as discussed with BPC-157, it's secondary effects could last much longer (this author still has to study that aspect). Still, generally favored by anyone with money and does not fear frequent injections, because of worries that continually high HGH levels of CJC-1295 DAC are unnatural and will likely cause problems in the long run.
- GRF Mod-1-29 works in synergy with Ipamorelin and other Growth Hormone-Releasing Peptides (GHRP), enhancing the effect of both.
- 100 to 500mcg per day, or split up in two doses per day, is the general advice, always on an empty stomach, away from meals that decrease HGH and increase insulin. Before sleep and upon wake up are the most common times.
- A certain Dr. William Seeds recommended 1 mcg per kg of bodyweight once per day. According to him, 100 mcg is a saturation dose, over which there would be no more extra release of HGH. Far from everyone agrees with that position though.

CJC-1295 DAC

- Growth Hormone-Releasing Hormone (GHRH), often referred to as a "peptide", that signals to the pituitary gland to produce more human growth hormone (HGH). It can be used for healing tendons, reducing bodyfat, a modest increase in muscle, and better skin.
- CJC-1295 DAC works in synergy with Ipamorelin and other Growth Hormone-Releasing Peptides (GHRP), enhancing the effect of both.
- Due to a half-life of 6 to 8 days, and elevated HGH/IGF-1 until 28 days after a series of injections, CJC-1295 DAC works powerfully on its own though, increasing various blood plasma levels by anything from 1.5 to 10x compared to baseline after just a single injection:
  - March 2006, Journal of Clinical Endocrinology & Metabolism, 'Prolonged stimulation of growth hormone (GH) and insulin-like growth factor I secretion by CJC-1295, a long-acting analog of GH-releasing hormone, in healthy adults': *"After a single injection of CJC-1295, there were dose-dependent increases in mean plasma GH concentrations by 2- to 10-fold for 6 d or more and in mean plasma IGF-I concentrations by 1.5- to 3-fold for 9-11 d. The estimated half-life of CJC-1295 was 5.8-8.1 d. After multiple CJC-1295 doses, mean IGF-I levels remained above baseline for up to 28 d. No serious adverse reactions were reported.*

    Conclusions: Subcutaneous administration of CJC-1295 resulted in sustained, dose-dependent increases in GH and IGF-I levels in healthy adults and was safe and relatively well tolerated, particularly at doses of 30 or 60 microg/kg. There was evidence of a cumulative effect after multiple doses."


A
30 mcg/kg on Days 0,7,14
20 mcg/kg on Days 0,7,14
Placebo
Serum IGF-1 (ng/mL) change from baseline
Average
Average
Days
'Prolonged stimulation of growth hormone (GH) and insulin-like growth factor I secretion by CJC-1295... in healthy adults'. March 2006, Journal of Clinical Endocrinology & Metabolism.
Extra color coding by ISGP-studies.com '24
B
30 mcg/kg on Days 0,14
60 mcg/kg on Days 0,14
Placebo
Serum IGF-1 (ng/mL) Change from Baseline
Days

In this study it appears the higher the injected dose, the more HGH/IGF-1 comes crashing down again. Maybe, unlike testosterone, you don't want to have very stable HGH levels, but it could well be that a much more affordable, 10mcg dose, or even less, after maybe a first 30mcg one, is able to keep HGH/IGF-1 levels quite flat around 100 ng/mL, as you see in the first week with the 20mcg/mL dose. For 3-4 weeks, while focused on healing, this may be more than fine.

- CJC-1295 DAC is banned in more countries than Ipamorelin and certainly BPC-157 and TB-500 due to its performance-enhancing abilities, unpredictable long-term dangerous side-effects, which are bound to pop up if you keep using this around the clock. There also are worries of boosting existing cancer growth someone may or may not be aware of. In that sense, this author only includes CJC-1295 because, in combination with Ipamorelin, BPC-157 and TB-500, it can help heal injuries that otherwise you simply can't.
- Experiences:
  - **Reddit post:** *"8 years ago I stopped deadlifting because I developed some sort of weird rear rib pain that felt like the left side of my back was exploding during the lift. 6 years ago I stopped squatting because of rib and knee pain. 5 years ago I stopped being able to do heavy pulls motions of any kind because my brachialis was always in pain. Shortly after than I stopped training completely. I never thought I would train again even though it was the biggest part of my life in my earlier years. Now 5 years later at 30yo, I am 255lbs at 11%bf, I bench 465, deadlift almost 600, and squatting 645. I started lifting*

again only 8 months and 25 days ago. No juice, only peptides from peptidesciences.
I took BPC from nootroo back in April. It got me going, but what healed my body and let me start deadlifting and squatting again was GHRP and GHRH peptides, as well as IGF and MGF.
You are doing this wrong... you are accruing damage and THEN trying to heal it with BPC. Bruh, if you have elevated GH, you dont get "wear and tear" damage from lifting. I literally went through periods of time where I was deadlifting my max every day, and doing heavy bench every day. I can come close to a big injury, but you detect it during your set, and then you give it like 2 days rest and then its completely gone. There is no need for BPC."

Unsure

B17

- Cyanide-releasing compound mainly found in the seeds of apricots, bitter almonds, apples, peaches, cherries and plums, and in the roots of manioc.
- Possibly there is a difference in quality between various Amygdalin supplement suppliers.
- It has been used as an anti-cancer treatment since at least 1845 in Russia. In the 1920s it was used in the United States as well, but was considered too poisonous.
- Wikipedia has a lengthy article on Amygdalin (B17). It summarizes various studies over the decades demonstrating that the compound is completely ineffectual to treat cancer, and even dangerous to one's health. At the same time though, Arab and Chinese sources in particular have documented various tumor-suppressing effects of Amygdalin in vitro, and would like to see it integrated into modern chemotherapy cocktails. The question, of course, seems if those in vitro results translate to the real world, and to what extent.
  - en.wikipedia.org/wiki/Amygdalin (accessed: May 27, 2024).
  - Jan. 28, 1982, The New England Journal of Medicine, 'A Clinical Trial of Amygdalin (Laetrile) in the Treatment of Human Cancer': *"One hundred seventy-eight patients with cancer were treated with amygdalin (Laetrile) plus a "metabolic therapy" program consisting of diet, enzymes, and vitamins. The great majority of these patients were in good general condition before treatment. None was totally disabled or in preterminal condition. One third had not received any previous chemotherapy. The pharmaceutical preparations of amygdalin,*

the dosage, and the schedule were representative of past and present Laetrile practice. No substantive benefit was observed in terms of cure, improvement, or stabilization of cancer, improvement of symptoms related to cancer, or extension of life span. The hazards of amygdalin therapy were evidenced in several patients by symptoms of cyanide toxicity or by blood cyanide levels approaching the lethal range. ... Amygdalin (Laetrile) is a toxic drug that is not effective as a cancer treatment."

- Aug. 2014, Journal of Cancer Research and Therapeutics (study by two CHiense doctors), 'Advanced research on anti-tumor effects of amygdalin': *"In recent years the development of antitumor drugs has been gradually transformed from cytotoxic drugs to improving the selectivity of drugs, overcoming multidrug resistance, development of new targeted drugs and low toxicity with high specificity drugs. Amygdalin is a natural product that owns antitumor activity, less side effects, widely sourced and relatively low priced. All these features make the amygdalin a promising antitumor drugs, if combined with conditional chemotherapy drugs, which can produce synergistic effect."*
- Feb. 15, 2016, Life Sciences journal (German study), 'Amygdalin delays cell cycle progression and blocks growth of prostate cancer cells in vitro'.
- Sep. 1, 2018, Bentham Science Publishers (study by 4 Arab doctors), 'Amygdalin from Apricot Kernels Induces Apoptosis and Causes Cell Cycle Arrest in Cancer Cells: An Updated Review': "Results: Data collected from already published articles revealed that apoptosis is a central process activated by amygdalin in cancer cells. It is suggested to stimulate apoptotic process by upregulating expression of Bax (proapoptotic protein) and caspase-3 and downregulating expression of Bcl-2 (anti-apoptotic protein). It also promotes arrest of cell cycle in G0/G1 phase and decrease number of cells entering S and G2/M phases. Thus, it is proposed to enhance deceleration of cell cycle by blocking cell proliferation and growth."
- June 2019, Cancer Medicine journal (study by Chinese doctors), 'Recent updates and future perspectives about amygdalin as a potential anticancer agent: A review': *"Amygdalin is known to have an antitumor effect in solid tumors such as lung cancer, bladder cancer and renal cell carcinoma by affecting cell cycle, inducing apoptosis and cytotoxicity, and regulating immune function."*
- Nov. 12, 2021, Current Pharmaceutical Biotechnology (study by two Arab doctors), 'Role of Amygdalin in Blocking DNA

Replication in Breast Cancer In Vitro'.

- Some modern people have claimed it controlled or cured their terminal cancer, with various users on YouTube stating they use it to try to get their cancer under control.
- There is a major red flag though. The two main persons cited to have cured their cancer with Amygdalin (B17) are Dr. Carl O. Helvie, in the 1970s; and Sandy Rog, in the 2010s. Dr. Helvie followed various protocols besides taking B17. He was juicing fresh vegetables daily, adding tons of supplements, and engaged in occasional fasting. Among other things, he didn't just cut out all carbohydrates, but also all meat. Most worrying though is that Dr. Helvie's protocol came from a Cayce Cult doctor, with his work essentially being a new age promotion of this Cayce Cult. As late as 1997 he co-published with Charles Thomas Cayce of the Cayce Foundation, a nest of ancient alien conspiracy disinformation since the 1990s tied in with Coast to Coast AM:
  - 2012, Carl O Helvie, 'You Can Beat Lung Cancer: Using Alternative/Integrative Interventions', pp. 45-56: *"In July 1974 I awoke from a dream telling me to go for a chest x-ray. ... They found a spot on my lungs... It was a malignant tumor... I spoke with Ursula who was in my Search for God Group. A non-denominational group interested in developing spiritually these groups use material from the Edgar Cayce readings... Ursula also introduced me to several people locally who had successfully used laetrile (vitmaine B17 or Amygdaline) as an alternative method of treatment for cancer and gave me the name of a physician in northern Virginia who had successfully treated many patients with it. ... My plan to forgo surgery and use alternative treatments was based upon: 1) the reading from the psychic who independently identified the tumor and advised against surgery ...*
    [His] usual plan included: 1) B-17... 2) Nutritional Supplements... 3) Diet: Mainly fresh uncooked fruitm vegetables, grains and nuts. Avoidance of animal protein, including dairy... 4) Detoxification ... through frequent fasting and or enemas.... My specific plans follows... A juicer is expensive but an important tool... A good basic salad sauce is 2 parts of olive oil and 1 part lemon whipped until creamy. ... "
  - Oct. 1997, Carl O. Helvie and Charles Thomas Cayce for the Journal of Evidence-Based Integrative Medicine, 'Alternative Treatment for Lung Cancer and Irregular Heartbeat: Two Case Studies': *"The authors share their successful use of alternative treatments for lung cancer and irregular heart beat in the hope that this knowledge might be useful to others. ... Successful treatments used for lung cancer included a special diet*

supplemented with laetrile and vitamins, meditation, prayer, psychic healing, visualization, and stress management."

- The other person who claimed Amygdalin (B17) cured her cancer was the feisty, very religious Mormon, Mormon Sandy Rog, who in 2013 posted a Youtube video entitled 'I Beat Cancer With Vitamin B17'. In 2019, after stopping B17, the cancer came back and lodged itself around the spine in her neck, in a place impossible to operate. She died on May 5, 2022 at age 51. Her story may not be untrue at all (and maybe B17 is able to kill or suppress cancer when it still is in a very early stage), but she does come across as a bit of "Amygdalin (B17) or bust" propagandist. Her story:
  - Oct. 29, 2019, Sandi Rog at her beatcancerwithb17.weebly.com:
    "Now for my updated account of how I can today celebrate seven years of being cancer free.
    MY STORY OF VITAMIN B17
    On November 1, 2010, I was diagnosed with Stage Four Non-Hodgkins T-cell Lymphoma when my oncologist found a tumor in my head. He gave me radiation for this tumor, which continued to light up on all the PET scans for the rest of my treatments, but the growth had stopped. Within a year-and-a-half I was given eight rounds of chemo ..., 35 treatments of radiation, a stem-cell transplant ..., and numerous amounts of drugs and one magnesium vitamin.
    Despite this aggressive protocol, all these traditional cancer treatments failed. After this, I was left with three tumors: one in my ribcage and two in my spine. By October 2011 they did radiation on these tumors in order to stop the growth.
    In the beginning of November of 2011 I saw a naturopathic doctor who gave me high doses of Vitamin C (via an IV), a slew of vitamins, and I got on Vitamin B17 [through a tip of her husband it seems]. ... The B17 worked, and by the end of December of 2011, I was [actually] declared in remission.
    At this time I was taking 70 pills a day, which included drugs from the oncologist and supplements from the naturopathic doctor, including the B17. It was too much for me, so I got off all the supplements (including the B17), but continued taking what my oncologist prescribed. Then in February of 2012, the cancer came back, revealing a tumor in my pelvic bone. Again, I got radiation, but I still didn't take any more of the supplements, including the B17.
    Then in June I got another PET scan which revealed more tumors. The tumor in my pelvic bone still lit up (just like the one in my head did until the end of December 2011), I had another tumor in my rib cage, and three in my lymph nodes. By this time we were defeated. I was going to die. My oncologist, Dr. Myint from Colorado University Hospital, said all he could

offer was more chemo, and sent me home to think about it. By this time, I had nothing to lose. I decided to slowly wean myself off the immune suppressant drugs (namely the Tac), along with all the other drugs the oncologist had me on, and I read up on Vitamin B17. At my next appointment with my oncologist, I refused the chemo (if I was going to die, I'd rather die strong than with my head in a toilet) and told the nurse practitioner that I was going to take Vitamin B17. Dr. Myint came in later, and when I asked him if he'd heard of B17, he puffed up his chest, and said, "Yes, of course." But that's all he said, and normally, he'd go on and on about the quackery of other alternative treatments we (my husband and I) had mentioned in the past, but this time he said nothing. They were willing to monitor me on this, and I was to return in eight weeks for another PET scan.

In August of 2012, I got on Vitamin B17, 500mg twice a day. Eight weeks later, these were the results of the PET scan: the tumor in my pelvic bone was gone; the one in my ribcage was gone; and the three in my lymph nodes, one was gone, the other was almost completely gone, and the other had shrunk so much my oncologist wasn't worried about it (by this time I had a new oncologist who was unaware that I was taking B17). After doing the math, I figured by ten weeks, all the cancer was gone.

Vitamin B17 wiped out my cancer on two separate occasions: December of 2011 while taking the immune suppressant drug (Tac) and in October of 2012 when I was off the Tac. This means the Tac had no affect on the cancer, and I could not have experienced a "spontaneous remission" as doubters believe. I've been free of cancer now for SEVEN years since October 2012, all because of God's stuff, His vitamin B17, a concentrated form of bitter apricot kernels. All the glory belongs to my Father who is in Heaven. Praise His Name!

Genesis 1:29, "Then God said, "I give you every seed-bearing plant on the face of the whole earth and every tree that has fruit with seed in it. They will be yours for food.""

- March 29, 2021, Sandi Rog at her beatcancerwithb17.weebly.com: *"It turns out I DO have lymphoma again. Last year I quit taking the B17 (it was causing my blood pressure to significantly drop), and now I have a tumor that's 10x8x8cm. It's wrapped around the spine in my neck and pressing on the nerves that lead to my right hand and arm (so I have little to no function in my right hand and arm), and because of its location, it's too risky to do surgery to take it out. Anyway, the tumor is too big IMO for the B17 to attack fast enough, so I agreed to do the following. My oncologist put me*

on an "immunotherapy" called Brentuximab. This is supposed to be a "targeted" therapy, which means it will only release the chemo into the cancer cell. Well, and even though the following wasn't supposed to happen, I am losing my hair. As a "targeted therapy" it shouldn't affect my hair. My doc looks at me strange and doesn't know why I'm losing my hair. He said it must be stress. ...

Anyway, what I realize now, but didn't realize a year ago when I quit taking the B17, is instead of stopping cold turkey, I simply should have gone back to the brand that originally wiped out my tumors. It didn't cause my blood pressure to drop so low. So I'm now back to taking www.tjsupply.com (two 500mg a day) without any problems. You see, I had switched to a brand by Apricots from God whose B17 was more "pure." Only thing is, because of that, it had an adverse reaction on my blood pressure. Now because my tumor is so big, I don't think the B17 will be able to work fast enough to knock it out..."

- April 30, 2021, Sandi Rog's husband at her beatcancerwithb17.weebly.com: *"Good news is the large tumor in Sandi's neck/back has not grown and seems to be inactive. Doctor says it resembles something like scar tissue. We were hoping that the radiation would give us a head start on killing the cancer. And now, Lord willing, the B-17 and other supplements can take it from there. There are a few, very small new spots: one in the lung and one in the lymph node in the right armpit. But, the doctor is not sure what they are. But, it is something to keep an eye on. The tumor has broken part of Sandi's C-7 vertebrae...*

  We are taking this as giving us a head start on killing the cancer and with the Lord's blessing we will continue with His supplements (B17, blushwood berries, MMS, and Paw Paw)."

Notes

1. Jan. 2015, JAMA Surgery, 'Increasing Disparities in Age-Related Incidence of Colon and Rectal Cancer in the United States, 1975-2010'.
2. May 2013, Journal of the Korean Society of Food Science and Nutrition, 'Inhibitory Effects of Cabbage Juice and Cabbage-Mixed Juice on the Growth of AGS Human Gastric Cancer Cells and on HCl-Ethanol Induced Gastritis in Rats'.
3. Jan. 1949, No. 1, California Medicine (uploaded atncbi.nlm.nih.gov), 'Rapid Healing of Peptic Ulcers in Patients Receiving Fresh Cabbage

Juice' (it talks about "vitamin U", these days known as methylmethioninesulfonium chloride).

4. 2014, Brazilian Journal of Oral Studies, 'Antifungal efficacy of Azadirachta indica (neem) - An in vitro study'.
5. Aug. 29, 2013, Molecular Medicine Reports (Indian study), 'Clinical evaluation of a formulation containing Curcuma longa and Boswellia serrata extracts in the management of knee osteoarthritis'.
6. 2015, Special issue no. 1 (S1:1), General Medicine: Open Access journal (L.A.), 'A Comparative Study of Natural Eradication of Helicobacter pylori vs. Antibiotics' (original title: 'Helicobacter Pylori: Impact on Human Health'.
7. April 5, 2020, Scientia Horticulturae (Science Direct), 'Antifungal effects of essential oils against Aspergillus niger in vitro and in vivo on pomegranate (Punica granatum) fruits'.
8. April 9, 2023 YouTube upload by 'Dr. Eric Berg', 'The Amazing Properties of Wormwood', top comment with 514 likes (accessed: June 6, 2024): *"I have to add....a friend of mine has had cancer multiple times. He was in the last stage and his wife found a Website where a cancer researcher testing mice with cancer was treating them with fenbendazole. (Animal dewormer) In the interim, she caught cancer and was in the last stage. She started to take the dewormer and in 8 weeks her scans were clear! My friend took the same dewormer and he too was clear in 8 weeks. He continues to take it weekly at certain doses and has been clear for 2 years!!"*.
9. Nov. 25, 2022 YouTube upload by 'Enrico Tartarotti', 'What Happened To Google Search?', comment section with over 16,000 comments (comments without upvotes were posted 10-12 months later): *"**[566 upvotes:]** "Putting Reddit at the end of search queries has saved me thousands of times. It's one of the most effective ways you can find something nowadays."*

   [491 upvotes:] *"My process usually involves: *Searching, with straight up wrong results. *Doing the quotes thing, to get specific words prioritized and then ending up with no results instead. *Putting reddit at the end of the first search and getting an immediate result."*

   [366 upvotes:] *"It's so weird. These days, if you want an actual human answer from someone not trying to peddle you something, you almost always have to put 'reddit' after your search. :("*

   [14 upvotes:] *"Google is a good search engine for reddit."*

   [No upvotes:] *"Glad I'm not the only one to find that the workaround for searches (which isn't just Google btw) is to add reddit at the end of the query. ... Things have stopped progressing and have actually regressed thanks to a few companies' stranglehold on the internet."*

   [1 upvote:] *"Almost every search I do these days ends with 'Reddit'.*

Only rarely does a normal google search matter, usually if I am shopping for something."

[No upvotes:] *"I never even knew other people were doing it, but over the past 5 years I've appended "reddit" to the ends of necessary searches. Wow."*

[No upvotes:] *"I didn't even think about it but when I search for something specific I always add reddit to the end, now it make sense why I do it."*.

10. Sep. 13, 2023 YouTube upload by 'Dr. Eric Berg DC', 'Dr. Berg Gets Censored (Silenced)': *"If any information related to health doesn't agree with the World Health Organization, the [YouTube] video won't necessarily be taken down, but it may be hard to find. This is supposed to protect viewers against misinformation and promote high-quality health information. But, their definition of misinformation is anything that opposes their viewpoint."*
11. May 20, 2024 YouTube upload by 'James Victory', 'Fenbendazole Day 28A [an experiment by a non-cancer person]_this is a reload from March 11, 2020': *"The policy and the guidelines which I had violated was that, "Content that spreads medical misinformation that contradicts the World Health Organization or local health authorities' info about cancer treatment [in this case]."*
12. youtube.com/watch?v=h67GhsXqodY (accessed: May 28, 2024; May 16, 2024 comment; 'My rectum's battle with doctors, Fenbendazole vs Cancer? CT results revealed'.
13. Oct. 14, 2022 YouTube by 'Institute of Human Anatomy', 'What EXACTLY Are Muscle Knots? And Why Do They Happen?'. youtube.com/watch?v=9ReQvhcQE84 (accessed: May 29, 2024)
14. April 25, 2021 YouTube upload by 'The Apples', 'My Non Small Cell Lung Cancer Diagnosis at 33 Years Old (Adenocarcinoma)'.
15. I've seen various additional "My family member ate super-healthy, was a vegan, but she has died of cancer"-comments that I can't find back. Maybe there's something to it. Maybe there is not. We'll see at a later point. *) April 25, 2021 YouTube upload by 'The Apples', 'My Non Small Cell Lung Cancer Diagnosis at 33 Years Old (Adenocarcinoma)' (complaints started right after second pregnancy; she died in 2023; there's clearly an LGBTQ aspect to her seemingly male partner): *"We were surprised by this diagnosis because I'm a pretty healthy person. ... I have never smoked. ... I'm vegan."*
16. Oct. 13, 2023 YouTube upload by 'The Apples', 'It has been Difficult-A Very Hard Week-Stage IV Cancer-NSCLC', 13:30: *"I have my own complete, clean nutrition energy drink. It was recommended by my oncologist that I keep drinking as much healthy protein as I can. And my sister found me this 2 years ago, when I was first ... diagnozed."*
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As demonstrated in two studies, nutritionally relevant concentrations of vitamin D2 (10 μg/100 g FW) in whole mushrooms can also be effectively achieved with a commercial pulsed UV lamp within a very short time period of 1–2 s (3–6 pulses) [41,42]. In contrast, it can take several minutes to generate the same concentration of vitamin D2 using a UV fluorescent lamp."
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